

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA**

Newport News Division

**PATRICIA E. MULLINEX ,
Individually and as Executor of the
Estate of Herbert H. Mullinex, Jr.**

Plaintiff,

v.

CIVIL ACTION NO.: 4:18-cv-00033

JOHN CRANE, INC., *et al.*

Defendants.

JOINT PROPOSED FINAL AMENDED PRETRIAL ORDER

In conformity with Federal Rule of Civil Procedure 16(b) and the Local Rules of Court for the United States District Court for the Eastern District of Virginia relating to pretrial procedure, it is hereby **ORDERED** that:

I. JURISDICTION

This Court has determined that it has jurisdiction under the federal officer removal statute, 28 U.S.C. §§ 1442. JCI removed this case from state court on March 23, 2018, (see Notice of Removal (ECF 1)), and Plaintiff filed a Motion for Remand (ECF 19-20), which was subsequently denied by this Court (ECF 45, 61). Plaintiff submitted Objections to the Magistrate Judge's Report and Recommendations Denying Plaintiff's Motion for Remand (ECF 47), and those objections were overruled by this Court.

II. STIPULATION OF UNDISPUTED FACTS

1. Herbert and Patricia Mullinex filed their original Complaint in the Circuit Court for the City of Newport News on November 14, 2016, naming JCI and 11 other Defendants.
2. JCI is a successor-in-interest to Crane Packing Company.
3. Herbert and Patricia Mullinex were married on January 27, 1981 and remained married until his death in November 2021.
4. Herbert Mullinex enlisted in the U.S. Navy on May 20, 1969.
5. Herbert Mullinex served onboard *U.S.S. Holder* from December 7, 1969 to June 28, 1971, as a Machinist's Mate Fireman (MMFN) and Machinist Mate Third Class (MM3).
6. Herbert Mullinex served onboard *U.S.S. Allen M. Sumner* from July 28, 1971 through March 12, 1973 as a Machinist Mate Third Class (MM3) and Machinist Mate Second Class (MM2).
7. Herbert Mullinex served onboard *U.S.S. Fulton* as a Machinist Mate Second Class (MM2) and Machinist Mate First Class (MM1) from March 23, 1973 through December 13, 1974 and was on shore duty from December 1974 to March of 1977.
8. Herbert Mullinex served onboard *U.S.S. Edson* from April 10, 1977 to until February 1, 1981 as a Machinist Mate First Class (MM1).
9. Herbert Mullinex's exposure to asbestos ended on October 23, 1978.
10. Herbert Mullinex retired from the U.S. Navy on February 28, 1989 as a Machinist Mate Senior Chief Petty Officer and was honorably discharged.
11. Herbert Mullinex was diagnosed with mesothelioma on July 27, 2016.
12. Herbert Mullinex's medical bills related to the treatment of his mesothelioma total \$1,078,883.70.
13. Herbert Mullinex died as a result of his mesothelioma on November 11, 2021, at the age of 73.

III. EXHIBITS

A. Learned Treatises/Expert Reliance Documents: The parties intend to utilize expert reliance documents and/or learned treatises with expert witnesses on direct and cross-

examination. The parties have agreed to not list learned treatises and expert reliance documents as they will not seek to formally admit them into evidence unless specifically identified as an exhibit. The evidence still must be based on a proper foundation at trial to use the documents.

B. Exhibits With No Objections: The parties agree that the exhibits listed on **Exhibit 1** may be introduced into evidence, by either party, without objection, subject to the appropriate foundation.

C. Plaintiff's Exhibits: The Plaintiff wishes to offer the following exhibits to which the Defendant, John Crane, Inc., objects where indicated as listed on **Exhibit 2**. Magistrate Judge Miller's rulings on JCI's objections are noted in the corresponding column.

D. JCI Exhibits: JCI wishes to offer the following exhibits to which the Plaintiff objects where indicated as listed on **Exhibit 3**. Magistrate Judge Miller's rulings on Plaintiff's objections are noted in the corresponding column.

IV. WITNESSES: The parties hereby designate the names and addresses of the witnesses who will (or may), without objection, testify at the instance of each (in addition to any witness testifying by deposition) and the purposes of such testimony.

A. Plaintiff Expects to Present the Following Witnesses at Trial (*denotes a "may call")

	Name & Address	Purpose	JCI Objection
1.	Herbert Mullinex, Jr., <i>by videotaped depositions taken July 2, 2018, and April 23, 2021</i> 519 Lake Road Stuarts Draft, Virginia 24477 (434) 223-1140	Plaintiff/Fact	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
2.	Patricia Mullinex 519 Lake Road Stuarts Draft, Virginia 24477	Plaintiff/Fact	

	(434) 223-1140		
3.	Randolph Getz, deceased, <i>by videotaped deposition taken October 23, 2017</i>	Fact	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
4.	Allan C. Kaulback, <i>by videotaped deposition taken October 16, 2017</i> 1725 McCowans Ferry Road Versailles, KY 40383 (330) 876-0428	Fact	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
5.	Dale Wells,* <i>by videotaped deposition taken October 25, 2017</i> 935 Maple Street Wilmington, IL 60481 (815) 353-9056	Fact	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
6.	David S. Rodda*, <i>by videotaped deposition taken October 30, 2017</i> 1912 NW 179 th Street Ridgefield, WA 98642 (360) 831-3303	Fact	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
7.	Thomas A. D'Amico, M.D., live or by videotaped deposition taken January 24, 2018 Duke University Medical Center Durham, NC 27710 (919) 681-0491 (919) 684-4891	Treating Physician	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
8.	Yuvari Choudhary, M.D.* Live or by videotaped deposition taken January 18, 2018 Virginia Cancer Institute 1401 Johnston Willis Drive, Suite 100 Richmond, VA 23235 (804) 330-7990	Treating Physician	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
9.	Amy L. Eye, RN* Live or by Zoom Augusta Health – Hospice of the Shenandoah	Fact Witness	

	64 Sports Medicine Drive Fishersville, VA 22939 540-932-4909		
10.	John C. Maddox, M.D. Department of Pathology Riverside Regional Medical Center Newport News, Virginia 23601 (757) 810-8857	Expert	JCI objects to the testimony of Dr. Maddox for the reasons set forth in ECF Nos. 193 and 378.
11.	William E. Longo, Ph.D. Materials Analytical Services, Inc. 3945 Lakefield Court Suwanee, GA 30024 (770)-866-3208	Expert	JCI objects to the testimony of Dr. Longo for the reasons set forth in ECF Nos. 206 and 379.
12.	David Rosner, Ph.D., MPH Columbia University Ronald H. Lauterstein Professor of Sociomedical Sciences and History and Co-Director, Center for the History of Ethics of Public Health Department of Sociomedical Sciences School of Public Health 722 West 168th Street, 9th Floor New York, NY 10032 (212) 305-1727	Expert	JCI objects to the testimony of Dr. Rosner for the reasons set forth in ECF No. 190.
13.	Dr. Terry Spear, Ph.D. Montana Tech of The University of Montana 1300 West Park Street Butte, MT 59701 (406) 496-4897	Expert	JCI objects to the testimony of Dr. Spear for the reasons set forth in ECF Nos. 216 and 376.
14.	Commander Andrew A. Ott ANDREW A. OTT, Inc. PO Box 64301 Virginia Beach, VA 23467 757-748-6153	Expert	JCI objects to the testimony of Dr. Ott for the reasons set forth in ECF Nos. 221 and 416.
15.	George Neil, Ph.D.* Thomas Jefferson National Accelerator Facility 12000 Jefferson Avenue Newport News, Virginia 23606	Expert	

	757-876-1775		
16.	George Springs, Corporate Representative for JCI, by prior depositions/trial testimony previously identified/designated	Fact/Defendant's 30(b)(6)designee	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
17.	George McKillop, deceased, by depositions previously identified/designated	Fact/Defendant's 30(b)(6)designee	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
18.	Vance Vorhees, deceased, by depositions deceased, by depositions previously identified/designated	Fact/Defendant's 30(b)(6)designee	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
19.	Florian Wisnewski, by depositions previously identified/designated	Fact/JCI former employee	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
20.	James Heffron, Corporate Representative for Garlock Sealing Technologies, by depositions taken August 21, 2007 and September 12, 2007 <i>In Re: Hawaii State Asbestos Cases</i> , Civil Action No. 07-1-ACM-002(EEH).	Fact	JCI has asserted objections to certain portions of the designated testimony which have been ruled on by the Court.
21.	Plaintiff reserves the right to offer the previously designated deposition testimony of any of the following custodians of records, to authenticate any business record or exhibit should the need arise. Plaintiff has previously provided JCI with the deposition designations for: Dell Perelman (American Chemistry Council), Bobby Joe Pigg (Asbestos Information Association), Doris Fagan Volpe (Asbestos Textile Institute), Daniel Braun (Industrial Hygiene Foundation), Lyn Berard (Industrial Hygiene Foundation), Maggie		

<p>Baumgardner (Johns-Manville), and Robert Marcek (National Safety Council). Plaintiff previously identified and provided these designations with Plaintiff's Rule 26(a)(3)(A) Disclosures. Plaintiff's designations are incorporated herein by reference.</p>		
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B. JCI Expects to Present the Following Witnesses at Trial

	Witness Name and Address		Plaintiff's Objection
1.	<p>Margaret A. McCloskey, Capt. USN (Ret.) 1917 Grace Church Road Silver Spring, MD 20910 (619) 710-9491</p>	Expert	<p>Plaintiff objects to McCloskey's testimony for the reasons stated in Plaintiff's Motion in <i>Limine</i> Regarding Margaret McCloskey (ECF Nos. 232-233); McCloskey's anticipated testimony regarding whether Mullinex was exposed to amosite asbestos insulation or lagging is speculative; she is not an industrial hygienist and is not qualified to give an exposure assessment, and she has no factual or evidentiary basis to testify about the presence of or removal of amosite in Mullinex's presence.</p> <p>Plaintiff further objects to the extent that McCloskey intends to offer any testimony regarding the alleged knowledge or negligence of the Navy, given that JCI has withdrawn its intervening negligence defense. Plaintiff objects for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Exclude Irrelevant Evidence and Testimony Regarding the Alleged Knowledge or Negligence of the Navy (ECF Nos. 207 and 212) and to the extent that JCI intends to illicit any opinions from McCloskey which would be probative of the sophisticated purchaser defense, which this Court has struck (ECF Nos. 80 and 174).</p>

			<i>Plaintiff further objects for the reasons stated in any objections to the Court's rulings regarding McCloskey.</i>
2.	David Sargent, R. Adm. USN (Ret.) 10114 Walker Lake Drive Great Falls, VA 22066 (703) 757-7038 (via live video feed pending court approval, see ECF No. 496)	Expert	<p>Plaintiff's object to Sargent's testimony for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Limit or Exclude Testimony of RADM David Sargent (ECF Nos. 82 and 84) and Objections to Order on Motion in <i>Limine</i> (ECF 143).</p> <p>Plaintiff further objects to the extent that Sargent intends to offer any testimony regarding the alleged knowledge or negligence of the Navy, given that JCI has withdrawn its intervening negligence defense. Plaintiff objects for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Exclude Irrelevant Evidence and Testimony Regarding the Alleged Knowledge or Negligence of the Navy (ECF Nos. 207 and 212) and to the extent that JCI intends to illicit any opinions from Sargent which would be probative of the sophisticated purchaser defense, which this Court has struck (ECF Nos. 80 and 174).</p>
3.	James Crapo, M.D. 4650 S. Forest Street Englewood, CO 80113 (303) 221-3201	Expert	<p>Plaintiff objects to Crapo's testimony to the extent he intends to rely upon any speculative and unreliable studies, as stated in Plaintiff's Motion in <i>Limine</i> to Prohibit Reference and Reliance Upon Speculative and Unreliable Studies and the Opinions Contained Therein (ECF Nos. 244-245) and upon any speculative and unreliable particle to fiber conversions, for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Prohibit Reference and Reliance Upon Speculative and Unreliable Fiber to Particle Conversion Factors (ECF Nos. 240-241).</p> <p>Plaintiff also objects to the extent that Crapo seeks to rely upon time-weighted</p>

			<p>averages, which are tantamount to dose reconstruction, for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Limit the Testimony of Industrial Hygiene and Medical Experts Regarding or Relying on "Dose Reconstruction" (ECF 218 and 222).</p> <p>Plaintiff further objects to Crapo's reliance upon Van Orden's lung digestion report, and moves to strike any reliance upon it, for the reasons stated in Plaintiffs' Motion in <i>Limine</i> to Strike the Lung Digestion Report of Drew R. Van Orden and Prohibit Any Testimony, Statement, or Argument Regarding his Report and Findings (ECF Nos. 226-227).</p>
4.	<p>Mary Beth Beasley, MD Department of Pathology Mt. Sinai Medical Center One Gustave L. Levy Place New York, NY 10029 (212) 241-5307</p>	Expert	<p>Plaintiff objects to Beasley's testimony to the extent she intends to rely upon any speculative and unreliable studies, as stated in Plaintiff's Motion in <i>Limine</i> to Prohibit Reference and Reliance Upon Speculative and Unreliable Studies and the Opinions Contained Therein (ECF Nos. 244-245) and upon any speculative and unreliable particle to fiber conversions, for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Prohibit Reference and Reliance Upon Speculative and Unreliable Fiber to Particle Conversion Factors (ECF Nos. 240-241).</p> <p>Plaintiff further objects to Beasley's reliance upon Van Orden's lung digestion report, and moves to strike any reliance upon it, for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Strike the Lung Digestion Report of Drew R. Van Orden and Prohibit Any Testimony, Statement, or Argument Regarding his Report and Findings (ECF Nos. 226-227).</p>

			<p>Plaintiff also objects to the extent that Beasley seeks to rely upon time-weighted averages, which are tantamount to dose reconstruction, for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Limit the Testimony of Industrial Hygiene and Medical Experts Regarding or Relying on "Dose Reconstruction" (ECF 218 and 222).</p>
5.	<p>Benjamin Heckman, CIH RHP Risk Management, Inc. 17 West South Street Carlisle, PA 17013 (717) 706-3847</p>	Expert	<p>Plaintiff objects to Heckman's testimony for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Limit or Exclude Testimony of Benjamin J. Heckman (ECF Nos. 228-229) and Plaintiff's Motion in <i>Limine</i> Regarding Gasket and Packing Videos Identified on the Report and Reliance List of Defense Expert, Benjamin J. Heckman (ECF Nos. 238-239).</p> <p>Plaintiff further objects to Heckman offering any videos of any testing, in accordance with this Court's Omnibus Order (ECF No. 353).</p> <p>Plaintiff also objects to the extent that Heckman seeks to rely upon time-weighted averages, which are tantamount to dose reconstruction, for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Limit the Testimony of Industrial Hygiene and Medical Experts Regarding or Relying on "Dose Reconstruction" (ECF Nos. 218 and 222).</p> <p><i>Plaintiff further objects for the reasons stated in any objections to the Court's rulings regarding Heckman.</i></p>
6.	<p>David Sicilia, Ph.D. Department of History, Key Hall 4282 Chapel Lane University of Maryland College Park, MD 20742</p>	Expert	<p>Plaintiff objects to Sicilia's testimony for the reasons stated in Plaintiff's Motion in <i>Limine</i> to Strike or Limit the Testimony of John Crane, Inc.'s Historical State of the Art Expert,</p>

	(301) 405-7778 <i>(via live video feed pending court approval, see ECF No. 496)</i>		David Sicilia, Ph.D., (ECF Nos. 230-231). <i>Plaintiff further objects for the reasons stated in any objections to the Court's rulings regarding Sicilia, to be filed.</i>
7.	Drew R. Van Orden, PE RJ Lee Group, Inc. 350 Hochberg Road Monroeville, PA 15146 (724) 235-1776	Expert	Plaintiff objects to the lung digestion report of Drew R. Van Orden, PE, and any reliance upon that report. For the reasons stated in Plaintiff's Motion in <i>Limine</i> to Strike or Exclude the Lung Digestion Report of Drew R. Van Orden and Prohibit Any Testimony, Statement, or Argument Regarding his Report and Findings (ECF Nos. 226-227).
		<i>Witnesses whom JCI may call at trial if the need arises:</i>	
8.	George L. Springs 4705 San Marcus Highway Lulling, Texas 78648 (713) 899-0749	Corporate designee	No objection, to the extent Springs testifies to matters within his personal knowledge pursuant to Fed. R. Evid. 602. Springs has admitted he had no personal experience or knowledge regarding sales to the Navy or military specifications for asbestos gaskets or packing or for government mandated warnings on those products.
		<i>Witnesses identified by JCI who may be called to testify at trial.</i>	
9.	Herbert Mullinex, Jr. 519 Lake Road Stuarts Draft, VA 24477 <i>(By Deposition)</i>	Plaintiff/fact	Plaintiff objects to the designation of the discovery depositions of Herbert Mullinex to the extent that JCI intends to present deposition testimony which is cumulative or irrelevant. The Court may exclude evidence which is needlessly cumulative pursuant to Fed. R. Evid. 403. To the extent the Court permits this cumulative testimony, Plaintiff further reserves the right to offer the portions of the deposition designated by Plaintiff pursuant to Fed. R. Civ. P. 32(a)(6), as previously provided with Plaintiff's counter-designations.

10.	Patricia J. Mullinex 519 Lake Road Stuarts Draft, VA 24477 (Live)	Plaintiff/fact	No objection.
11.	Allan C. Kaulback 9532 State Route 7 Kinsman, OH 44428 (By Deposition)	Fact	<p>Plaintiff intends to call Allan C. Kaulback either by deposition or live at trial.</p> <p>To the extent that Allan Kaulback testifies live at trial, Plaintiff objects to the extent JCI intends to present deposition testimony which is cumulative of Kaulback's live testimony. The Court may exclude evidence which is needlessly cumulative pursuant to Fed. R. Evid. 403.</p> <p>To the extent that Allan Kaulback testifies by deposition, Plaintiff has previously provided her counter-designations and objections to JCI which have been ruled upon by the Court.</p>
12.	Randolph E. Getz (Deceased) 1015 East James Street Lehigh, PA 18235 (By Deposition)	Fact	Plaintiff has previously provided her counter-designations and objections to JCI for Randolph Getz's deposition which have been ruled upon by the Court.
13.	Dale Wells 935 Maple Street Wilmington, IL 60481 (By Deposition)	Fact	<p>Plaintiff intends to call Dale Wells either by deposition or live at trial.</p> <p>To the extent that Dale Wells testifies live at trial, Plaintiff objects to the extent JCI intends to present deposition testimony which is cumulative of Wells' live testimony. The Court may exclude evidence which is needlessly cumulative pursuant to Fed. R. Evid. 403.</p>

			To the extent that Dale Wells testifies by deposition, Plaintiff has previously provided her counter-designations and objections which have been ruled upon by the Court..
14.	Dave S. Rodda 1912 N.W. 179 th Street Ridgefield, Washington 98642 (<i>By Deposition</i>)	Fact	<p>Plaintiff intends to call Dave Rodda either by deposition or live at trial.</p> <p>To the extent that Dave Rodda testifies live at trial, Plaintiff objects to the extent JCI intends to present deposition testimony which is cumulative of Rodda's live testimony. The Court may exclude evidence which is needlessly cumulative pursuant to Fed. R. Evid. 403.</p> <p>To the extent that Dave Rodda testifies by deposition, Plaintiff has previously provided her counter-designations and objections which have been ruled upon by the Court.</p>
15.	Steven Ibosh 3224 Bright Stark Cove Bartlett, TN 38134 (<i>By Deposition</i>)	Fact	To the extent JCI intends to call Steven Ibosh as a witness in JCI's case, Plaintiff has previously provided their counter-designations and objections to Steven Ibosh's testimony which have been ruled upon by the Court.

C. Testimony by Deposition

1. Plaintiff's Deposition Designations

The Plaintiff will introduce the deposition testimony or portions thereof of Herbert H. Mullinex, Jr. (July 2, 2018 and April 23, 2021), Randolph Getz (deceased) (October 23, 2017), and George Springs (November 5, 2019, September 29, 2017, February 26, 2016, March 1, 2016 and June 24, 2013), George McKillop (May 20, 2001 ((Paccione)), April 20, 2009, May 27, 1988, February 22, 2007), Vance Vorhees (March 3, 1983), Florian Wisniewski (September 21, 1994

and May 22, 2009), James Heffron (August 21, 2007 and September 12, 2007), Dr. Thomas D'Amico (January 24, 2018), Dr. Yuvari Choudhary (January 18, 2018), Allan Kaulback (October 16, 2017), Dale Wells (October 25, 2017), and Dave Rodda (October 30, 2017).

Plaintiff has designated portions of this testimony to be presented to the jury, and JCI has provided its objections thereto, and has counter-designated portions of this testimony. Magistrate Judge Miller has reviewed and ruled upon the designations, counter-designations and objections as reflected in his Order dated April 28, 2022 regarding deposition designations (*See* ECF 502; ECF 502-1).

Plaintiff also reserves the right to offer the deposition testimony of any of the following Custodians of Record to the extent necessary to authenticate any business record from any of the following organizations. Dell Perelman (American Chemistry Council), Bobby Joe Pigg (Asbestos Information Association), Doris Fagan Volpe (Asbestos Textile Institute), Daniel Braun (Industrial Hygiene Foundation), Lyn Berard (Industrial Hygiene Foundation), Maggie Baumgardner (Johns-Manville), and Robert Marcek (National Safety Council). Plaintiff previously identified and provided these designations with Plaintiff's Rule 26(a)(3)(A) Disclosures. Any of Plaintiff's designations not included in Magistrate Judge Miller's Order dated April 28, 2022 are incorporated here by reference with **Exhibit 4**.

2. JCI's Deposition Designations

JCI will introduce the deposition testimony of Herbert Mullinex, Jr. (May 9, 2017 and May 10, 2017) and Steven Ibosh (October 18, 2017). JCI has designated portions of this testimony to be presented to the jury, and Plaintiff has provided its objections thereto, and has counter-designated portions of this testimony. Magistrate Judge Miller has reviewed and ruled upon the designations, counter-designations and objections as reflected in his Order dated April 28, 2022

regarding deposition designations (*See* ECF 502; ECF 502-1).

IV. FACTUAL CONTENTIONS

A. Plaintiff's Factual Contentions are as follows:

SUMMARY

1. Plaintiff Herbert H. Mullinex, Jr. (hereinafter "Bert Mullinex" or "Mullinex") served as a machinist mate in the United States Navy from 1969 to 1989, entering as a machinist mate fireman apprentice and retiring as a senior chief petty officer/machinist mate.

2. From December 7, 1969 until June 28, 1971, Mullinex worked in the engine room of the *USS Holder*, a Navy destroyer.

3. From December 28, 1971 until March 12, 1973, Mullinex worked in the engine room of the *USS Sumner*, a Navy destroyer.

4. From April 10, 1977 until February 1, 1981, Mullinex worked in the engine room of the *USS Edson*, a Navy destroyer.

5. Throughout his service on the *Holder* and the *Sumner* and until October 28, 1978 on the *Edson*, Mullinex was routinely and frequently exposed to and breathed uncontrolled asbestos dust and fibers from the intended use and removal of asbestos gaskets and packing manufactured by John Crane, Garlock and Chesterton.

6. Mullinex's exposure to asbestos gaskets and packing manufactured and sold by JCI is corroborated by Allen Kaulback, his supervisor on *USS Holder*, by David Rodda, his coworker on *USS Holder*, by Dale Wells, the preventive maintenance management coordinator on *USS Edson*, and Randolph Getz, Mullinex's supervisor on *USS Edson*.

7. On the 27th day of July, 2016, Mullinex was diagnosed to have malignant pleural mesothelioma, an incurable cancer, caused by his cumulative asbestos exposure in the Navy.

8. On November 11, 2021 Mr. Mullinex died as a result of his mesothelioma at the age of 73.

9. At no time prior to October 23, 1978 was Mullinex aware of any danger or health hazards associated with breathing asbestos dust and fibers from pipecovering products, insulation products, gaskets, or packing. His coworkers had likewise never been concerned of any hazard associated with any asbestos-containing products. At no time prior to that date was Mullinex warned by anyone that breathing asbestos dust and fibers could cause any serious illness or death, or that there were any safety precautions that should be taken to avoid breathing asbestos dust and fibers from the intended use of any asbestos-containing product including asbestos sheet gasket material, valve packing, pump packing, or insulation materials.

10. On October 23, 1978, Mullinex was advised by the Navy in a safety class that

breathing asbestos dust and fibers from asbestos insulation products, pipecovering, cement or cloth, could cause serious illness or death and that the danger from these fibers arose from the fact that asbestos fibers were invisible in the air.

11. Although the class did not mention any hazards or danger in the intended use and removal of asbestos gaskets and packing, from this information concerning the danger of invisible fibers, Mullinex inferred that the intended use and removal of asbestos gaskets was also likely to be dangerous even though there was minimal visible dust associated with the intended use and removal of these products; consequently, when Mullinex returned to the *Edson* he ordered respirators (face masks) and Tyvek suits for his crew of machinist mates.

12. From October 23, 1978, until the end of his Navy service in 1989 whenever Mullinex or his crew fabricated or removed asbestos gaskets on the *Edson* or on any ship on which Mullinex was assigned, both Mullinex and his crew wore protective face masks and Tyvek suits to avoid breathing asbestos dust and fibers.

13. Mullinex's intelligent response to the warning about asbestos insulation conclusively proves that if Mullinex had been given an adequate warning about the dangers of asbestos gaskets and packing prior to October 23, 1978, he would have followed that warning. As he demonstrated in 1978, once he knew that asbestos gaskets and packing which appeared to be safe were in fact dangerous and could kill him, it would have been obvious that the pipecovering which was also asbestos and created visible asbestos dust was just as dangerous and could kill him just as easily. Consequently, he would have known that all asbestos-containing products were dangerous, he would have protected himself, and he would not have contracted mesothelioma.

FACTS CONCERNING JCI AND THE STATE OF THE ART

14. John Crane, Inc. ("JCI") manufactured over 300 varieties of asbestos-containing gaskets and packing and sold many of these products to the Navy prior to and during Mullinex's exposure period. By 1970, JCI admits that it knew that asbestos was a health hazard that could cause deadly diseases including asbestosis, lung cancer, and mesothelioma. However, that information had long been known to the asbestos industry and to the medical community as set forth in this summary.

15. JCI is a Delaware Corporation, registered to do business in Illinois.

16. JCI was organized in Illinois in 1917 and has been headquartered in Illinois since that time. Originally, JCI had an asbestos gasket and packing plant in Chicago. In approximately 1954, JCI moved its asbestos gasket and packing plant to Morton Grove, Illinois.

17. By 1931, JCI had operations nationwide with branches in all major US cities and in Canada. JCI also had common ownership with Crane Packing Ltd., its English subsidiary from August 1923 through 1936.

18. In 1930, His Majesty's Stationary Office published the official Merewether & Price *Report on Effects of Asbestos Dust on the Lungs and Dust Suppression in the Asbestos Industry* in England where JCI's English subsidiary was located. The Report recommended dust control

measures for asbestos work including local exhaust ventilation, substitution of mechanical methods in place of hands-on methods, enclosure of dust-producing operations, and wetting of products to reduce dust, and education of workers. The report also warned of the hazards of “[s]awing, grinding, trimming, polishing and other abrading machines, used on dry asbestos products.” This article was also republished in the United States in 1930.

19. From at least 1931 to 1985, JCI manufactured and sold asbestos textiles, valve packing, pump packing, rope, wick, and cloth gaskets. Some of these materials were impregnated with graphite (asbestos valve and pump packing), but others contained no such binders. The percentage of asbestos in each of these products varied from 30 to 70 percent asbestos or more including both chrysotile asbestos as well as crocidolite asbestos.

20. From at least 1954 until the late 1970s, JCI bought crocidolite asbestos fiber and thread from the North American Asbestos Company for use in the manufacture of crocidolite asbestos packings for use by industry for acid resistance. In 1975, John Crane stated in its catalog that crocidolite was carcinogenic and that crocidolite packings would no longer be sold; but purchase orders demonstrate John Crane continued to buy crocidolite asbestos fiber until at least 1977 for the manufacture and sale of crocidolite packing. John Crane admits that none of these products ever contained a warning label.

21. From at least 1946 to 1985, JCI’s chrysotile asbestos packing products, including packing styles 810, 810W, 6AMCR, 187-I, 300, 140, SS1, 250N, 150, 601ECA, C78, 4810m, 4877, 48771, C06, C994, and C-65, qualified for use under federal or Navy specifications; and these products were sold to the Navy throughout Mullinex’s exposure period, December 1969 through October 23, 1978.

22. From 1931 to 1985, JCI sold asbestos sheet gasket material to the Navy under the style of JCI 2150. This product was advertised by John Crane to contain 80 percent chrysotile asbestos. It was manufactured by Raybestos-Manhattan and rebranded as John Crane 2150.

23. From at least 1954 until the late 1970s, JCI bought crocidolite asbestos gasket material from Gatke Company and rebranded this product for sale by JCI as John Crane Style number 2112. JCI sold this product in sheets and also as precut gaskets. These gaskets were cut on a gasket table by hand and by machine that was equipped with exhaust ventilation. These crocidolite gaskets were sold to industry but not to the Navy.

24. From 1931 to 1985, JCI sold John Crane 2150 chrysotile asbestos-containing sheet gasket material in bulk and also as precut gaskets to both commercial and Navy customers. During the 1950s, 1960s, and 1970s, JCI manufactured these precut gaskets by cutting them from sheets of JCI 2150 asbestos sheet gasket material by both hand cutting and machine cutting on a “gasket cutting” table equipped with exhaust ventilation.

25. The U.S. Navy had a generic numerical symbol, a code, for all asbestos gasket and packing materials, and this code was posted on a chart known as the B-153 chart in the engine rooms of the Navy ships on which Mullinex served to advise workers of the gaskets and packing that could be used for specific equipment and temperature ranges.

26. The Navy code for asbestos sheet gasket material was “2150.”

27. From approximately 1946 to the 1960s, JCI directed Raybestos-Manhattan, the manufacturer of its asbestos sheet gasket material, to stamp the following information all over the sheet gasket material it sold to the Navy: "2150 NAVY HIGH PRESSURE JOHN CRANE SHEET PACKING CRANE PACKING COMPANY."

28. JCI put its name and other marketing artwork (a diamond pattern in black and yellow) all over the packaging and spools of its asbestos valve and pump packing materials.

29. There was no difference in the packaging of any asbestos-containing product manufactured or distributed by JCI to the Navy and the asbestos-containing products sold by JCI to private industry.

30. There was no difference in the composition of any of the asbestos-containing products manufactured or distributed by JCI to the Navy and the asbestos-containing products sold or distributed by JCI to private industry.

31. Prior to 1980, JCI placed no warnings or safety instructions on the packaging, the spool, the box, the rolls, or the individual sheets of any of its 300 asbestos-containing products that were sold to private industry or to the Navy, including its 2150 asbestos gasket material and more than a dozen asbestos packing materials.

32. John Crane has admitted in this case that the United States Navy never expressly rejected, prohibited, or forbade John Crane from including any warning with or on any product that it sold or supplied to the U.S. Navy, the Department of Defense, or the United States government.

33. In the 1930s, as demonstrated by multiple medical articles and textbooks, the disease of asbestosis was well recognized in the medical communities in both England and the United States as a potentially deadly disease that could be prevented with the use of dust control methods and education of workers to "a sane appreciation of the risk" from breathing asbestos dust and fibers.

34. The specific risk of asbestosis as widely published in the 1930s was directed to the asbestos textile industry, which included gaskets and packing products manufactured or sold by JCI ; specifically, asbestos packings made from raw chrysotile and raw crocidolite asbestos fibers as well as chrysotile and crocidolite yarn. It also included the manufacture of "jointings" which was the name of gaskets at that time. *See e.g.* National Safety Council report by Shirley.

35. JCI was a member of the Illinois Manufacturer's Association ("IMA") from 1930 through 1986. Karl Rohlen was the President of JCI from 1952 to 1976 and was a member of the IMA from at least 1952 through 1976.

36. In acknowledgement of the well-known disease of asbestosis, in 1936 Illinois passed an occupational disease act that expressly made a deadly disease called "asbestosis," which is solely caused by asbestos exposure, a compensable disease under Illinois workers' compensation law.

37. The same year, 1936, the IMA established a bureau to help IMA members, like JCI,

understand and comply with the new occupational disease act.

38. From the 1940s through the 1970s, JCI provided exhaust ventilation and dust masks for the workers in its asbestos gasket and packing manufacturing plant in Illinois. Eighty percent of all products manufactured in this plant contained asbestos, and by 1971 the plant was using 8,000 pounds of raw asbestos per week.

39. By 1943, JCI had “49 service engineers in branch offices in the USA and a few foreign countries.”

40. In the 1940s, the Illinois Department of Labor published a variety of articles concerning the risk of asbestosis in a variety of asbestos product industries in Illinois.

41. In 1945, an industry organization called the Manufacturing Chemists’ Association (“MCA”) published a guide for the preparation of uniform hazard warning labels known as the Manual L-1, A Guide for the Preparation of Warning Labels for Hazardous Chemicals.” The L-1 Guide provided guidelines for preparing warning labels for toxic dust and carcinogens. As these guidelines explained, the degree of hazard determines whether the label says danger, warning, or caution.

42. In 1946, the proceedings of the American Conference of Governmental Industrial Hygienists (“ACGIH”) adopted a tentative safety proposal of 5 million particles per cubic foot (mppcf) as an accepted Threshold Limit Value (TLV) for preventing asbestosis (not cancer).

43. In 1947, the Illinois Department of Public Health, Division of Industrial Hygiene. Published an article summarizing the guidelines and standards of the MCA for the development and use of warning labels with products that create dangerous airborne dust.

44. In 1949, the Journal of the American Medical Association published a major editorial which explained that it had now been proven that asbestos causes lung cancer.

45. In 1951, Illinois promulgated the Health and Safety Act and the Health Safety Rules of the State of Illinois. Part J, Rules and Regulations required warning labels for the use, handling, and storage of substances harmful to the health and safety of employees, effective June 15, 1951. These labeling requirements applied to all containers of substances known to “constitute a health hazard.” This included harmful dust from inhalation. The Illinois labeling law essentially codified the MCA’s L-1 Manual for the preparation of warning labels.

46. In 1952, the American Conference of Governmental Industrial Hygienists adopted the standards for warning labels that had been previously published by the Manufacturers Chemists Association in its L-1 Manual for the Preparation of Warning Labels, a standard that provided guidelines for preparing warning labels for dangerous dust, toxic chemicals, and carcinogens.

47. In 1952, in response to the labeling requirements of the Illinois Health & Safety Act, Johns-Manville, which also had a plant in Illinois that manufactured asbestos products, recommended that an asbestos warning label be placed on shipments of asbestos to comply with the Act.

48. As of at least 1952, Safety and Health Standards of the United States Department of Health and Labor for contractors performing federal supply contracts under the Walsh-Healey Public Contracts Act required contractors to ensure that employees were not exposed to asbestos levels above the ACGIH TLV for asbestos dust, i.e.: 5 million particles per cubic foot (mppcf).

49. In 1955, the Bureau of Medicine of the United States Navy adopted the recommendation of 5 mppcf of asbestos dust as a threshold limit value along with hundreds of other threshold limit values for toxic chemicals and dangerous dust like silica and diatomaceous earth.

50. In 1956, the Secretary of the Navy issued a letter establishing The Uniform Labeling Program – Navy (1956) to ensure that the users of hazardous products received warnings. This letter set forth the requirements for the Navy's internal uniform labeling program for hazardous materials, including toxic dust. The letter noted it was establishing a supplemental internal warning program and that product manufacturers normally employed the MCA L-1 Manual for warnings on products sold to the Navy.

51. In 1957, the Department of Defense (DOD) issued Amendment B to its MIL-STD-129, which dictated mandatory requirements for the packaging and storage of materials sold to the DOD including the Navy. This amendment to MIL-STD-129 specifically adopted the warning label standards of the MCA L-1, a Guide to the Preparation of Warning Labels for hazardous chemicals.

52. MIL-STD-129B required warnings on all "package units" to be "ultimately issued to the consumer who may be exposed to such chemicals under conditions of ordinary use," in accordance with the MCA L-1 Guide. (See Section 2.2.10.4.3, Page 6). "Markings of unpacked items shall be accomplished by stenciling, lithographs, silk screening, photo marking, and other similar process." (See Section 4.1.1)

53. From 1957 to 1979, all military specifications for compressed asbestos sheet packing and for asbestos valve and pump packing required all suppliers and manufacturers of these products to the Navy to comply with MIL-STD-129.

54. Gasket and packing materials sold to the Navy from 1957 until 1970 were governed by identical requirements in subsequent revisions in 1960 (MIL-STD-129C) and 1964 (MIL-STD-129D).

55. In 1958, in further response to the labeling requirements of the Illinois Health & Safety Act, Johns-Manville recommended warning labels for its asbestos-containing marine bulkhead material called Marinite.

56. In 1958, the American Industrial Hygiene Association reported asbestos gaskets as a source of asbestos exposure which could create the risk of cancer.

57. Throughout the 1950s, numerous medical publications further established the fact that asbestos exposure could cause lung cancer.

58. In 1960, Dr. J. C. Wagner published a landmark article entitled *Diffuse Pleural*

Mesothelioma and Asbestos Exposure in the North Western Cape Province, which reported on 33 cases of malignant mesothelioma, most of whom had only peripheral or bystander exposure to crocidolite asbestos, the same fiber utilized by JCI at its Morton Grove plant from the 1930s until the late 1970s.

59. In 1960, the federal government enacted the Federal Hazardous Substances Labeling Act, Pub. Law 86-613 (FHSLA), which required hazard warning labels on hazardous substances intended or suitable for household use and defined as toxic. The term “toxic” applied “to any substance which has the capacity to produce personal injury or illness to man, through ingestion, *inhalation*, or absorption. . .”

60. In 1960, JCI’s research lab was recognized in national publications. The lab had multiple chemical engineers who could have conducted any research that JCI might have requested. In various catalogs published by JCI, the competence and availability of this research lab was trumpeted to the public. However, JCI did no research and performed no testing to determine asbestos fiber release from the foreseeable use of its asbestos-containing products.

61. In 1961, the MCA amended its L-1 Guide, *inter alia*, to incorporate by reference the FHSLA and to adopt the FHSLA’s definitions of “hazardous substance” and “toxic” from the FHSLA into this industry-wide warning label guide focused on industrial materials.

62. In 1962, multiple cases of mesothelioma were reported in the medical literature regarding shipyard workers who had only received intermittent exposure to asbestos.

63. In 1964, DOD amended MIL-STD-129D. This version of the standard continued to require warning labels on all packages units to be ultimately issued to the consumer in accordance with the 1961 version of the MCA L-1 Guide.

64. In 1964, the Navy approved “Temp-mat” a fiberglass product, as a substitute for removable pads that contained amosite asbestos; and Navy industrial hygienist, William Marr, published an article declaring that asbestos pipecovering was hazardous and that safety precautions should be taken to prevent the disease of asbestosis.

65. In 1964, Dr. Irving Selikoff conducted a landmark conference in New York City for the National Academy of Sciences. Dozens of papers were presented concerning the risk of mesothelioma, lung cancer, and asbestosis in job sites, industries, and cities throughout the United States and the World, highlighting the fact that occupational exposure to chrysotile, amosite, and crocidolite created the risk of mesothelioma from occupational, household, and environmental exposure. The conference was highly publicized. It was recognized at this conference that there was no known safe limit for asbestos exposure, the TLV of 5 mppcf for asbestos dust provided no protection from mesothelioma, and that the TLV was based on counting total dust—not asbestos fibers—consequently, it was of little value.

66. From 1964 until 1970, dozens of peer-reviewed medical articles appeared in medical journals, textbooks, and medical conferences, as well as industrial hygiene publications, concerning the rising incidence of mesothelioma in workers who used asbestos products, in bystanders, family members, and environmental exposures. This ultimately led asbestos to become the first substance to be studied by NIOSH and regulated by OSHA in 1970.

67. Between 1964 and 1968, numerous manufacturers of asbestos-containing pipecovering materials (Johns-Manville, Pittsburgh-Corning, Owens-Corning, and GAF) began to place caution labels on the packaging of asbestos insulation products sold to both the Navy and industries. These labels did not use the word danger or warning, they were inconspicuous and inadequate according to the Fifth Circuit Court of Appeals in its opinion *Borel v. Fibreboard* (1973), but these labels were instituted in recognition of the duty of an asbestos product manufacturer to warn the users of its products, including the United States Navy.

68. In 1965, the Navy published "Safety Precautions for Shore Activities," which referenced the risk of asbestosis from insulation products and the importance of warnings for insulation products.

69. In 1966, the federal government amended FHSLA by renaming it the Federal Hazardous Substances Act (FHSA). Among other amendments, FHSA provided:

The term *label* means a display of written, printed, or graphic matter upon the immediate container of any substance or, in the case of an article **which is unpackaged or is not packaged** in an immediate container intended or suitable to deliver to the ultimate consumer, **a display of such matter directly upon the article** involved or upon a tag or other suitable material affixed thereto."

70. In 1968, Captain Riblett of the United States Navy wrote in a major report that asbestos pipecovering activities were a major hazard in the United States Navy and needed to be controlled, but in the same document Riblett concluded that asbestos gaskets and packing were not hazardous because they were not friable and did not create visible dust.

71. In 1968, a report concerning asbestos materials used in English shipyards reported that asbestos jointings (gaskets) were not visibly dusty "unless they are ground, polished or sawn." Prior to 1980, no actual dust measurements were reported in this paper or any other subsequently published industrial hygiene report from England or the United States concerning airborne asbestos released from fabricating asbestos gaskets or removing asbestos gaskets.

72. In 1969, Naval Supply Systems Command promulgated MIL-STD-1341(SA), which required contractors to provide material safety data sheets (MSDS) and warning labels for any "hazardous material" supplied to the Navy. Appendix B to this Navy standard defines a "Hazardous Material" as a material that "(b) Has a threshold limit value below. . . 25 mppcf for dust or (g) in the course of normal operations may produce dusts. . . which have one or more of the above-characteristics." At this time, asbestos had a TLV of 5 mppcf; consequently, by this definition, asbestos and products that release asbestos dust "in the course of normal operations" were "hazardous material[s]" and required MSDS sheets and warning labels.

73. In 1970, DOD adopted almost verbatim the warning and MSDS requirements of MIL-STD-1341 for all DOD agencies in MIL-STD-1341A.

74. In 1970, DOD promulgated MIL-STD-129E. Among other amendments, this version of MIL-STD-129 incorporated by reference both MIL-STD-1341A and the FHSA, as well as the MCA L-1 Guide. Among other amendments, MIL-STD-129E split the hazard warning provision into the following two paragraphs:

5.2.2.5 Hazardous chemicals and materials. All unit and intermediate packages of hazardous chemicals and materials (including aerosol propellants) shall have affixed thereto the applicable warning label prescribed by MIL-STD-1341 (Symbols For Packages and Containers For Hazardous Industrial Chemicals and Materials), the Manufacturing Chemists Association Manual L-1, Guide to Precautionary Labeling of Hazardous Chemicals, and by DOD instructions and military specifications and other standards as published.

5.2.2.5.1. Hazardous substances, all package units of hazardous substances (as defined in Public law 86-613, federal Hazardous Substances Act) to be ultimately issued to the consumer, shall have affixed thereto such warning labels as may be required by public law 86-613, and amendments or changes thereto.

75. Despite the foregoing, JCI claims in its answers to sworn interrogatories to have *first* learned of the alleged health hazards of asbestos in approximately 1970 by reason of general publicity surrounding the passage of OSHA.

76. OSHA did not exist until 1971. Between 1971 and 1979, OSHA's permissible exposure limits and regulations applied to the relationship between a private employer and employee in the United States. OSHA had no jurisdiction in the United States Navy. No OSHA regulators were permitted to inspect Navy ships. During this time period, the warnings required by Federal law, the Department of Defense, and the Navy, from manufacturers of asbestos-containing products to the Navy and to Navy sailors were not governed by OSHA or dictated by OSHA. Likewise, any exemption from OSHA's caution label regulations had no impact on the duties required by Federal law, the Department of Defense, or the Navy.

77. In 1971, OSHA provided an exemption from its caution label requirement for asbestos products where no foreseeable use could exceed the permissible exposure level. The DOD standards did not contain any exemption from its caution label requirements.

78. To determine whether the foreseeable uses of an asbestos product exceeded the OSHA permissible exposure level, air monitoring and testing was required unless the manufacturer of the asbestos gaskets believed that it was obvious that the intended use of asbestos gaskets could release asbestos fibers in excess of the OSHA PEL.

79. The OSHA permissible exposure limits have been reduced over time but at no time did OSHA or NIOSH contend that these permissible exposure limits would prevent cancer or mesothelioma in susceptible people. OSHA and NIOSH have always maintained that there is no known safe level of exposure to asbestos that will assure that mesothelioma or cancer do not occur in susceptible people.

80. In 1971, the federal government promulgated Fed. Std. 313, which is mandatory for all federal agencies. Fed. Std. 313 is virtually identical to MIL-STD-1341A. Among other things, it required that:

Government agencies shall reference this standard in commodity specifications, purchase descriptions, purchase orders, contracts and other purchase documents to assure inclusion

of adequate requirements and clear instructions to contractors for the application of symbols and submission of Material Safety Data Sheets.

81. In 1971, the Illinois Pollution Control Board issued an opinion supporting rulemaking within the state that was slated to take effect the following year in 1972. The opinion specifically noted that asbestos-containing gaskets were a source of asbestos emissions, that Illinois was enacting a 2 f/cc maximum allowable concentration for asbestos (far lower than the then current 5 f/cc OSHA limit), and that prohibited visible dust from the manufacture or use of asbestos products. The “principal concern in these regulations is to prevent or limit the emissions into the atmosphere resulting *from the use of* asbestos and asbestos-bearing products” not merely the manufacture of such products. JCI subsequently applied for a variance from the regulations and was forced to invest in a costly new exhaust ventilation system, demonstrating that JCI had actual knowledge of these regulations of its home state.

82. In 1972, OSHA rejected using the word “warning” on asbestos product labels and chose the word “caution” instead. OSHA also rejected putting the word “cancer” on the label. These decisions were in contradiction of the recommendation of NIOSH and the Manufacturing Chemists Association that the word “warning” be used and that the danger of cancer be included in the warning.

83. In 1972-1973, Greene, Tweed & Company, which manufactured asbestos gaskets for the Navy and for private industry under the trade name of Palmetto, decided to put a caution label on all of its asbestos-containing sheet gasket material. (Testimony of corporate representative George Crowther, October 14, 2004)

84. In 1973, Johns-Manville Corporation declined to test its asbestos gasket material because the intended use of asbestos gaskets included cutting, sawing, band sawing, slitting, drilling, die cutting and punching; consequently, Johns-Manville concluded that there was no question that any fabrication of gaskets would result in levels far above OSHA requirements.

85. In 1974, according to Answers to Interrogatories filed by Raybestos-Manhattan in the United States District Court for the Eastern District of Virginia, Raybestos placed a caution label on all of its asbestos sheet gasket material commencing in 1974. John Crane purchased that asbestos sheet gasket material from 1964 until 1985, and its corporate representative has testified that he never saw a warning or caution label on the asbestos sheet packing 2150 that was provided to John Crane by Raybestos with John Crane’s name on it.

86. In 1974, John Call, the corporate representative for Anchor Packing Company, testified in a deposition dated June 25, 1993, that its asbestos gasket material was also supplied by Raybestos-Manhattan during the years 1967 to 1981. Raybestos rebranded the gasket material with Anchor’s name. Like John Crane, Anchor was an approved supplier of asbestos gaskets to the Navy. Call testified that Anchor Packing began to place caution labels directly on its compressed asbestos sheet packing in the mid-1970s and that Raybestos-Manhattan enclosed a card describing the hazards of asbestos dust with each shipment of its compressed asbestos sheet gasket material.

87. In 1975, Westinghouse Corporation prepared a memorandum to its safety department concerning the fact that asbestos gaskets manufactured by Nicolet, a manufacturer of

asbestos gaskets, had a caution label advising of the hazards of asbestos exposure. Nicolet was an approved supplier of asbestos gaskets to the Navy.

88. In 1976, JCI initiated its first air monitoring program for its employees at their asbestos gasket and packing plant in Morton Grove, Illinois; and during this year NIOSH specifically advised John Crane that testing of products that appeared to be encapsulated was necessary because the release of airborne asbestos fibers was not visible to the naked eye. John Crane did not conduct any such testing.

89. Reports from the Industrial Hygiene Foundation demonstrate that monitoring for airborne asbestos dust was being done by Raybestos-Manhattan, Johns-Manville, and Garlock in the 1940s, 30 years before John Crane initiated its asbestos monitoring program at its factory.

90. In 1977, the Product Liability Committee of Garlock determined that all of their asbestos gasket and packing materials should be labeled with the OSHA caution label. The corporate representative for Garlock testified that caution labels were placed on Garlock's asbestos sheet gasket material commencing in 1977 with regard to sales to both the Navy and all other private industry. (See Heffron testimony from Hawaii.)

91. Prior to 1980, JCI did no testing concerning the potential fiber release from the intended uses of asbestos gaskets, no other asbestos gasket manufacturer performed any such testing, and no asbestos gasket manufacturer provided any asbestos gasket testing to the United States Navy concerning airborne asbestos fiber release from the intended and foreseeable use of asbestos gaskets.

92. Between 1974 and 1977, Garlock, Raybestos-Manhattan, Nicolet, and Greene Tweed, all of whom were manufacturers of asbestos gasket material that was sold to the Navy, began to place caution labels on the packaging or the face of their asbestos sheet gasket material.

93. Assuming OSHA caution labels were on the packaging or face of some asbestos sheet gasket material sold to the Navy, that label was either so inconspicuous that no one saw it or so inadequate that no one remembered it because no witness has yet been found who ever saw a warning or caution label on any packaging of asbestos gasket material or on the face of any asbestos gasket material on a Navy ship. This includes the Navy experts for both Plaintiff and Defendant in this case, the decedent, Mr. Mullinex, himself, and coworkers.

94. In 1978, the United States Navy issued two reports concerning asbestos gaskets. One concluded that cutting gaskets was dangerous and that strict safety procedures should be followed and that warnings should be issued to workers (Hobby, Long Beach, California). The other concluded that no special safety precautions were necessary (Liukonen, Puget Sound, Washington).

95. From 1931 to 1979, John Crane sold compressed asbestos sheet packing 2150 and a variety of asbestos valve and pump packing products to the Navy with full knowledge of the anticipated environment in which these products would be used by the Navy, specifically, in the engine rooms of Navy ships where asbestos gaskets and asbestos packing products would be used in tandem with and adjacent to asbestos insulation products on steam lines and equipment. As a consequence, John Crane also knew that any asbestos exposure to the crew of the engine rooms of

Navy ships would come from both asbestos insulation products as well as asbestos packing and gaskets because at all times the permissible exposure limit of the Navy and of all industrial hygiene standards referred to the total asbestos exposure in the environment—not to just exposure from one product or another.

96. John Crane had specific employees, including Newell Brackett, who were charged with the responsibility of being the liaison between John Crane and the Navy; and these liaisons knew exactly where John Crane's asbestos gasket and packing would be used in the engine rooms of Navy ships.

97. In 1983, in response to demands from the Navy and other customers, JCI began to put a caution label on all of its asbestos-containing products, including asbestos gaskets and packing.

98. Prior to 1980, JCI admits it had never researched or conducted testing to determine the health hazards associated with the exposure of human beings to asbestos.

99. Prior to 1980, JCI admits it did not consult with any doctor or industrial hygienist concerning any foreseeable health risk associated with the intended use of asbestos gaskets or packing.

100. Prior to 1980, JCI also admits it never provided any warning or caution labels on its asbestos-containing products, on the packaging of its products, spools, boxes, rolls, or sheets, or on MSDS sheets accompanying its products that were sold commercially or to the Navy.¹

¹Magistrate Judge Miller has issued a Report and Recommendation holding that JCI is estopped from asserting that the Navy prohibited it from placing warnings anywhere other than on the face of its gasket material. (ECF 350). Therefore, it is an undisputed fact that JCI could have placed a warning anywhere other than on the face of its gasket material. Nevertheless, even in the face of Judge Miller's order, JCI continues to argue that it may assert that the Navy prohibited it from using even non-gasket-face warnings. JCI refuses to agree to list this as an undisputed fact. Judge Miller specifically held that:

JCI obtained removal by pointing to Plaintiffs' allegedly last-minute decision to add a failure to warn claim based on gasket-face warnings. Its present claim that the [government contractor] defense applies equally to its warnings on the packaging would severely undermine its timeliness arguments. . . . Therefore, JCI should not be permitted to make this argument later.

(ECF 350 at 16); *see also* (ECF 350 at 14) (noting that "the fact issue in this motion is whether the Government exercised control over non-gasket face warnings") (emphasis added) (citing *Lowery v. Stovall*, 92 F.3d 219, 224 (4th Cir. 1996) (§ 1983 claim holding that "[o]ur review of the record shows that the district court properly applied the doctrine of judicial estoppel to preclude [the plaintiff] from disputing that he maliciously attacked Redd before [police officer] Stovall shot him) (emphasis added); *see also* *Dorsey v. Ruth*, 22 F. Supp.2d 753, 756 (D. Md. 2002) (applying

101. Prior to 1980, JCI also admits that it never notified or discussed the potential hazards of its asbestos gasket and packing products with the Navy.

102. JCI's Navy expert, Radm. Sargent admits that the hazards of gaskets and packing were "not on the Navy's radar" before at least the mid-1970s and likely much later.

103. JCI's other Navy expert, Capt. McCloskey, testified that she was unaware of the hazards of asbestos gaskets and packing when she served as the asbestos control officer on *USS Yosemite* in the early 1980s.

104. JCI contends that it destroyed all records of sales prior to 1977.

TESTIMONY OF MULLINEX AND HIS COWORKERS

105. On December 7, 1969, Mullinex was assigned to the *USS Holder*, a Navy destroyer, with the rank of machinist mate fireman. Mullinex was assigned to the forward engine room where he worked with 12 to 15 other machinist mates to maintain and service valves, pumps, and other equipment. There were approximately 18 pumps and 300 valves in that space. The engine room was estimated to be approximately 30 feet high, 30 feet wide, and 30 feet long, with two decks, some open grated and some solid.

106. Mr. Mullinex was routinely and frequently exposed to uncontrolled asbestos fibers and dust from his work installing, fabricating, removing, and replacing JCI's asbestos-containing gaskets and packing from December 7, 1969 to June 28, 1971, as a Machinist's Mate Fireman (MMFN) and Machinist Mate Third Class (MM3) onboard *USS Holder*, and from working in close proximity to other machinist mates who were also installing, fabricating, removing and replacing JCI's gaskets and packing in Mullinex's presence onboard *USS Holder*.

107. Mullinex testified that the repair of a valve often involved removing a removable portable pad covering the valve. Pads were composed of either asbestos cloth (chrysotile) or fiberglass cloth and made by the shipyard workers, in shops. Prior to 1964, these pads may have been stuffed with either amosite or fiberglass, and after 1964, they were stuffed with fiberglass. All of these pads were also painted with multiple layers of white rubberized paint on top of the cloth. Neither Mullinex nor his coworkers knew what the pads were made out of.

Lowery and granting a police officer's motion for summary judgment in § 1983 claim, holding that "because [the Plaintiff] admitted in his plea agreement that he put Trooper Gruber in danger by backing his vehicle at her, and he is estopped from arguing anything inconsistent with such an assault, there is no genuine issue of material fact as to whether Officer Ruth had justification for his use of force against [the officer]" (internal quotations omitted).

While Plaintiff has objected to Magistrate Judge Miller's order to the extent that it allows JCI to argue that the Navy prevented it from warning on the face of its gasket material, Judge Miller's holding recommends specifically precluding JCI from arguing that the Navy prohibited it from warning anywhere other than on the face of its gasket material. Therefore, if this Court affirms and adopts Magistrate Judge Miller's R&R on this issue, it will be an undisputed fact that the Navy did not prevent JCI from placing a warning anywhere other than on the face of its gasket material.

108. The pads, which looked like a pillow, were made to be easily removed so that workers could access equipment for repairs without damaging the pad. To remove the pad, they would unlace wires that held the pad in place somewhat like unlacing a shoe. They would then remove the pad and lay it aside undamaged. There is no testing that has ever been done by the Navy, or anyone else to our knowledge, that demonstrates what, if any, asbestos fiber release may occur from unlacing, unwiring, or re-attaching a portable pad.

109. Then the machinist mate would unbolt the flanges of the valve from the flange of the pipe. After the bolts were removed, the machinist mate would separate the flange of the valve from the flange of the connecting pipe. If the seal between the two flanges was a compressed asbestos sheet gasket, that gasket would typically split when the joint was broken, leaving embedded asbestos gasket residue on both flange faces. Sometimes, typically on cold water lines, the gaskets would simply be hard and brittle and come off more easily; but even on those occasions, gasket residue would stick to the flanges.

110. Asbestos gasket residue on the flanges had to be completely cleaned from each flange prior to placing a new gasket between the two flanges when the valve was returned to the line; otherwise the connection would leak. Accordingly, machinist mates would have to clean both of the valve flanges, and both of the connecting pipe flanges for a total of four flange faces anytime a valve was removed from the line for repairs. Cleaning the flanges required the use of scrapers, hand wire brushes, and in some instances power wire brushes. Mullinex also used a chisel and a pocket-knife to remove gasket residue. Mullinex did not see visible dust in the air when this work was done. It typically took Mullinex 15 to 30 minutes to remove gasket residue from each flange, depending upon how badly the gasket residue adhered to the flange face.

111. To make a replacement gasket, machinist mates would obtain a square piece of compressed asbestos sheet gasket material large enough to cover the face of the flange. This piece was typically cut from the 4 foot by 4 foot sheets of compressed asbestos gasket material. Next, the machinist would use a ball peen hammer to punch a hole in the asbestos sheet gasket material and put a bolt through the hole in the material and into a bolt hole on the flange to hold the asbestos sheet gasket material in place on the flange. The machinist mate would then use the ball peen hammer to cut the outer circumference of the gasket and the inner circumference of the gasket against the outer and inner edges of the flange face. The machinist mate would then knock out each of the bolt holes required to attach the new gasket back to the flange using either the ballpeen hammer or a punch if one was available.

112. It typically took Mullinex approximately 15 minutes to cut each gasket out of asbestos-containing sheet gasket material with a ball peen hammer. When making two gaskets, Mullinex would often use this first gasket as a template to punch out the second gasket. Again, Mullinex did not see visible dust in the air when this work was being done.

113. On *USS Holder*, Mullinex typically removed at least one to two valves per week. Each valve required removing old deteriorated asbestos gaskets and cutting new gaskets from asbestos-containing sheet gasket material, as well as removing the old deteriorated asbestos valve packing and installing new asbestos packing. Machinist mates would also have to remove a bonnet

gasket from a valve and cut a new gasket from asbestos-containing sheet gasket material. During the overhaul of *USS Holder*, he and ten other machinist mates removed nearly all of the valves, approximately ten valves a day following these same procedures.

114. During Mullinex's service on the ship, *USS Holder* went on a cruise to the Mediterranean and occasionally docked in Naples, Italy, for repairs. From July 1970 until February 1971, *USS Holder* was home ported in Norfolk. The ship underwent one repair availability alongside the destroyer tender, *USS Sierra* (AD 18), in February 1971, and underwent a Regular Overhaul from March 1, 1971 to June 1, 1971 at Philadelphia Naval Shipyard, Philadelphia, Pennsylvania.

115. Hundreds of valves would be removed during an overhaul. Each valve typically contained 3 gaskets: 2 flange gaskets and a bonnet gasket. consequently, at least 500 to 1,000 gaskets were removed and replaced in each engine room.

116. The primary method Mullinex used for fabricating asbestos gaskets was with a ball peen hammer. Mullinex also used various hand punches to make the bolt holes for the gaskets. Apart from repair availabilities and overhauls, Mullinex estimated that he typically removed one or two valves every week on *USS Holder*. Each valve required fabrication of two to three gaskets.

117. To remove gaskets from flanges, Mullinex's typical work methods included scrapers and hand wire brushes. These tools were necessary because the gaskets would typically stick to the flanges and would partially disintegrate as a consequence of the pressure and heat of the lines in which they were installed.

118. Valves and pumps also required the use of asbestos packing. When valves and pumps leaked, the machinist mates would open the valve or the pump and remove and replace the packing. Asbestos packing resembled a rope of various sizes that was packed into "glands" surrounding valve and pump shafts to prevent leaking. The installation and removal of asbestos packing was a daily job in the engine rooms. To install packing, Mullinex would cut the graphite-covered asbestos packing with a knife into pieces to wrap around the shafts on valves, pumps, and other engine room equipment.

119. The packing would degrade from the heat, pressure and friction of the valve or pump shaft and become hard and brittle. To remove the asbestos packing, Mullinex used a "packing pick" described as a long rod with a sharp point or as a corkscrew-like ending to grab the packing pieces from a shaft. The old, brittle packing would break apart into pieces and would release dust and debris. Mullinex removed packing material frequently and blew out any remaining packing dust and residue with compressed air or with his mouth to assure it was clean and all of the packing had been removed.

120. Mullinex did not recall the manufacturers of the asbestos gaskets or packing that he used onboard the *Holder*. The only thing he recalled was that the crew frequently referred to gasket material generically as Garlock material.

121. Allan Kaulback was Mullinex's supervisor onboard *USS Holder* during the period

December 1969 to February 1971. Kaulback testified that John Crane and Garlock were the primary manufacturers and suppliers of asbestos sheet gasket material and asbestos packing material onboard the *Holder* during his supervision of Mullinex. Kaulback confirms that Mullinex's routine job duties included fabricating asbestos gaskets with a ball peen hammer and removing asbestos gaskets with scrapers and hand wire brushes. Kaulback viewed the video testing of Dr. William Longo and confirmed that the work methods and tools used in that video were substantially identical to those used on the *Holder* to fabricate gaskets and to remove gaskets. Kaulback testified that the removal of packing on a valve would take about an hour, and on a pump it could take a couple of hours. Kaulback did not ever see any warnings on any asbestos products and did not know of any safety precautions that should be followed for asbestos gaskets and packing.

122. Dave Rodda was also a co-worker of Mullinex's onboard *USS Holder* from May 1970 until August 1971. From March 1971 until the end of June 1971 *USS Holder* was overhauled in the Philadelphia Navy Shipyard. Throughout the overhaul both Rodda and Mullinex worked together on a daily basis in the engine rooms of *USS Holder*. Rodda specifically identified John Crane and Garlock as the manufacturers of the asbestos gaskets and packing that were installed on the *Holder* and removed from the *Holder* during the overhaul. Rodda testified that he and Mullinex removed hundreds of valves, fabricated hundreds of gaskets, and cleaned gasket residue from hundreds of flanges during the four-month overhaul. Rodda confirms that the videotaped testing by Dr. Longo which demonstrates gaskets being fabricated with a ball peen hammer and gaskets being removed with scrapers and hand wire brushes was identical to the work that he and Mullinex did together during the overhaul. Rodda did not ever see any warnings on any asbestos products and did not know of any safety precautions that should be followed for asbestos gaskets and packing.

123. On July 28, 1971, Mullinex was transferred to *USS Allen Sumner*, where he continued the routine and frequent fabrication and removal of asbestos gaskets in the forward engine room.

124. Mullinex's job duties on the *USS Sumner* were the same as on the *USS Holder* with the additional responsibility of teaching lower-ranking crew members the duties of a machinist mate. The frequency of Mullinex's gasket and packing work on *USS Sumner* was "about the same" as on *USS Holder*. Approximately 70 percent of his time on the *Sumner* involved working in the engine room with twelve to fifteen other machinist mates, and 30 percent of his time was spent in the log room doing administrative work related to technical manuals, daily logs, and ordering parts and materials for the ship.

125. From his administrative work on the *Sumner*, Mullinex learned that the manufacturers of the asbestos gaskets onboard the *Sumner* were John Crane, Garlock, and Chesterton; and that these same companies manufactured the asbestos packing materials used onboard the *Sumner*. He also recalls the names and branding of these companies on the sheets of asbestos gaskets and on the spools and packages of the asbestos packing.

126. *USS Sumner* was overhauled during May, June, and July 1972 at Philadelphia Navy Yard. During the overhaul of *USS Sumner*, he estimated that he and the other machinists removed

about 300 valves, and for each valve they cleaned the flanges and made 2 or 3 replacement asbestos gaskets. It also involved removing and reinstalling asbestos packing from these valves. In June 1972, Mullinex was promoted to machinist mate second class. Throughout his service on *USS Sumner*, Mullinex continued to routinely and frequently (1) install and remove asbestos packing and (2) remove, fabricate, and install asbestos gaskets.

127. After the overhaul, from October 1972 to August 1973, Steven Ibosh became a co-worker of Mullinex's on *USS Sumner*. Ibosh corroborates Mullinex's testimony regarding his work with and around JCI's asbestos-containing sheet gasket and packing material and corroborates the tools and work methods described by Mullinex. Ibosh also occasionally saw power wire brushes being used by others on *USS Sumner*.

128. Mullinex served on *USS Fulton* as a Machinist Mate Second Class (MM2) and Machinist Mate First Class (MM1) from March 23, 1973 through December 13, 1974. On *USS Fulton*, Mullinex was assigned to the O2N2 plant making liquid oxygen and liquid nitrogen, and his job duties did not involve asbestos exposure. While onboard *USS Fulton*, Mullinex was promoted to machinist mate first class.

129. In December 1974, Mullinex was transferred to shore duty where he stayed until March 1977. His shore duties did not involve any asbestos exposure.

130. On April 10, 1977, Mullinex was transferred to *USS Edson*, a destroyer. In 1976, before Mullinex was assigned to the ship, it had undergone an overhaul in Long Beach, California, where the asbestos insulation in the engine rooms had been removed. Navy specifications prohibited the use of asbestos insulation for repairs or construction after 1974.

131. As a machinist mate first class, Mullinex supervised twelve to fifteen other machinist mates in both the forward and aft engine rooms of the *USS Edson*. *USS Edson* was a reserve ship, and primarily a training ship; consequently, it stayed in port about 70 percent of the time. The machinist mates under Mullinex's supervision regularly and frequently fabricated, installed, and removed asbestos gaskets. They also regularly and frequently cut, installed, and removed asbestos packing from valves, pipes, and other equipment in the engine room. Mullinex identified the manufacturers of both the asbestos gaskets and the asbestos packing materials as John Crane, Garlock, and Chesterton, explaining that these products were used interchangeably.

132. On *USS Edson*, the machinist mates did the same work as on *USS Holder* and *USS Sumner*, but because it was a teaching ship for reservists, they removed "a little more" valves, i.e., 6 valves per week, resulting in fabricating and removing as many as 24 gaskets a week. *USS Edson* underwent an extended repair period during September and October of 1977 in Norfolk, Virginia. This activity involved the daily fabrication and removal of asbestos gaskets from dozens of valves as well as the removal and reinstallation of asbestos packing material.

133. *USS Edson* also underwent one repair availability by Boston Naval Shipyard conducted pierside, U.S. Naval Base, Newport, Rhode Island beginning on October 10, 1978.

134. Randolph Getz was Mullinex's supervisor on *USS Edson* from April 1977 to June

1979 in both the aft engine room and forward engine room. Getz corroborates Mullinex's work with and around asbestos-containing sheet gasket material and packing manufactured by John Crane and Garlock. He also recalled Johns-Manville materials. Getz corroborates the tools and work methods described by Mullinex. Getz also corroborates that Mullinex routinely supervised other machinist mates performing gasket and packing work. Getz estimated it took 30 minutes or longer to remove packing. Getz has reviewed the videotapes of Dr. Longo and confirms that the gasket fabrication and removal methodology demonstrated in those videos was identical to the work methods used onboard the *Edson*.

135. The most common type of material that was used by Mullinex and his crew of machinist mates for gaskets in the engine rooms of *USS Holder*, *USS Sumner*, and *USS Edson* was "compressed asbestos sheet gasket "2150." This material came in sheets approximately 4 feet square, ranging from 1/32 inch to 1/4 inch in thickness, it was grayish white, and the manufacturer of the material and other information was stamped all over the sheet. This material was used to make flange gaskets, bonnet gaskets, and casing gaskets. The compressed sheet gasket 2150 was used to make gaskets for low pressure steam, cold water, fresh water, feed water, and lube oil. "It was an all-around gasket material." About 70 percent of the gaskets in the engine room were composed of compressed asbestos sheet 2150; and 25 percent of the gaskets were Flexitallic gaskets used for high-pressure steam valves. Less than 5 percent of the gaskets were made of other materials, such as rubber.

136. In the course of his work onboard *USS Holder* and *USS Allen Sumner*, Mullinex routinely and regularly fabricated asbestos gaskets from JCI's 2150 sheet gasket material with a ball peen hammer and sometimes a punch, and he removed asbestos-containing gaskets with a scraper, a wire brush, and sometimes a knife. JCI's gaskets were used interchangeably with gaskets manufactured by Garlock and Chesterton on both of these ships. Mullinex knew that he removed JCI gaskets because he removed gaskets from flanges that he had previously put JCI gaskets on.

137. On *USS Edson*, Mullinex routinely and regularly supervised reservists who were doing this fabricating and removing JCI asbestos gaskets, and occasionally personally fabricated these asbestos gaskets himself from JCI's 2150 sheet gasket material with a ball peen hammer and sometimes a punch. Mullinex also assisted with the removal of JCI, Garlock and Chesterton asbestos-containing gaskets with a scraper, a wire brush, and sometimes a knife. On all three of these ships, Mullinex was exposed as a bystander to airborne asbestos dust and fibers from the routine and frequent fabrication and removal of JCI's asbestos-containing gaskets by the members of his crew of machinist mates who worked in the same spaces, at the same time, using the same products, tools and methods that Mullinex used. Ten to fifteen machinist mates were assigned to each engine room.

138. In the course of his work onboard *USS Holder* and *USS Allen Sumner*, Bert Mullinex installed and removed asbestos pump and valve packing manufactured by JCI, Garlock and Chesterton on a daily basis. He installed packing by cutting it with a knife and installing it on the pump or valve shaft, and he removed asbestos-containing packing with packing hooks and pullers, and compressed air. On *USS Edson*, Mullinex routinely and regularly supervised reservists who were being trained to install and remove asbestos-containing pump and valve packing, using

the same products, tools and methods. On all three of these ships, Mullinex was exposed as a bystander to airborne asbestos dust and fibers from the routine and frequent installation and removal of JCI's asbestos-containing packing by the members of his crew of machinist mates who worked in the same spaces, at the same time, using the same tools and methods that Mullinex used. Ten to fifteen machinist mates were assigned to each engine room.

139. Mullinex first learned about asbestos products, specifically asbestos gaskets, asbestos packing, and asbestos insulation, when he was trained to be a machinist mate in the United States Navy. The machinist mates training manual (Machinist Mates 3 & 2) directed that the machinist mate should refer to a chart designated as a B-153 Chart to determine the type of material to use for gaskets and packing on various valves, pumps, and equipment and for various temperatures and applications in the engine rooms of Navy ships. The chart designated that compressed asbestos sheet packing that was used to fabricate asbestos gaskets was No. 2150 ("2150 was the designated trade name for John Crane's compressed asbestos gasket material"); and metal asbestos-impregnated gaskets (Flexitallic gaskets) were designated as No. 2410. The chart also designated a variety of asbestos pump and valve packing materials, the descriptions of which match asbestos-containing pump and valve packing sold by John Crane.

140. Mullinex testified that on *USS Edson*, he supervised approximately 30 machinist mates. During a typical week, he estimated that approximately 6 valves would be removed in each engine room, requiring at least 12 gaskets for those 6 valves for both engine rooms, so that would be 24 gaskets per week and 36 gaskets if a bonnet gasket was required for each valve. During a repair period of *USS Edson* from September to October 1977, Mullinex testified that he supervised the removal of approximately 20 to 30 valves, each of which required his crew to make 2 or 3 gaskets per valve—gaskets that were manufactured by John Crane, Garlock, and Chesterton. As a supervisor, Mullinex would typically be within 5 or 6 feet of the machinist mates when they were doing this gasket work; but he would typically only stay in one place for approximately 5 minutes at a time.

141. On *USS Holder*, *USS Sumner*, and *USS Edson*, the only ventilation was forced ventilation that blew the air around. The debris from the asbestos gasket and valve packing work was swept up with a broom, foxtail brushes, and dustpans and put into a trash can. They also used compressed air to blow the dust and residue.

142. Each valve and each pump also contained asbestos packing which came in various shapes and forms on spools. Packing could be square or round, graphite covered or plain white, and it came in a variety of sizes from 1/8 inch to 1 inch thick. This material covered the shaft of the valve or the pump to prevent leakage. The B-153 chart showed the particular type of asbestos packing that should be used for the particular applications required.

143. Much of the piping in the engine rooms of Navy ships was insulated, but Mullinex's duties on *USS Holder*, *USS Sumner*, and *USS Edson* did not involve the removal or replacement of insulation. Mullinex recalled that the pipe covering insulation typically ended several inches prior to the flange of the pipe that attached to the flange of the valve or pump so that machinist mates would not need to disturb it to unbolt pumps and valves. Rarely, a flange bolt was too long and there was not enough room between the insulation and the flange to remove the bolt. In those

instances, he would have to make a small cut in the pipe covering insulation (approximately two to three inches) with a knife or a hacksaw just far enough to get the bolt out. Navy destroyers like *USS Holder*, *Sumner*, and *Edson* did not carry replacement pipe insulation, so if he had to cut a small piece of pipe insulation, he would make a temporary repair using Eagle-66 cement and lagging cloth.

144. Mullinex, his coworkers, and his supervisors did not know what the pipe covering insulation was comprised of; nor did they know the brands or manufacturers of any of the pipe covering that he or other machinist mates repaired. During some shipyard repair periods, he would occasionally see shipyard workers who would take out a 2-foot section of pipe covering and put it back; but that was not work that he did or supervised.

145. During his service periods onboard *USS Holder*, *USS Sumner* and *USS Edson*, in the time periods specified above, Bert Mullinex's clothes, person, and his belongings were covered with and contaminated with asbestos dust, fibers and particles generated from the intended, ordinary, and foreseeable use of JCI's asbestos-containing gaskets and packing.

TESTING OF ASBESTOS GASKETS AND PACKING FOR FIBER RELEASE

146. Asbestos fibers are microscopically small and invisible to the naked eye. Historically, industrial hygienists have looked for visible dust as an indication of potentially dangerous occupational exposure. But the visible dust from an asbestos-containing product represents only the tip of the iceberg because millions of airborne asbestos fibers can be present but completely invisible. For this reason, asbestos experts have known that you cannot rely upon your eyes to determine the nature and extent of any dangers from asbestos dust. Since the 1940s researchers have used Tyndall lighting to illustrate otherwise invisible asbestos fibers; but since the 1930s, it has been well known that the only way to measure asbestos fibers in the air is to capture them on a filter and examine them under a microscope where they can be counted and analyzed.

147. The fact that airborne asbestos fibers that are released from the intended use of a product are invisible is the reason why manufacturers must test their products to determine if the fibers released exceed the microscopic permissible exposure level dictated by OSHA.

148. Between 1969 and 1979, no one in the United States Navy ever performed any air sampling to determine airborne asbestos fibers onboard ship from the fabrication and removal of asbestos gaskets and packing. No air samples exist from any air sample performed by the United States Navy at any time on any Navy ship which distinguish between airborne chrysotile asbestos and airborne amosite asbestos. No air samples for airborne asbestos fibers from any asbestos-containing products were performed at any time on the *Holder*, the *Sumner*, or the *Edson* while Bert Mullinex was onboard. As a consequence, no quantitative dose reconstruction can be made concerning the asbestos exposure of Bert Mullinex, and any evaluation of the causation of his mesothelioma requires a qualitative assessment of his exposure in consideration of his testimony, the testimony of his coworkers, and the testing of asbestos gaskets, packing, and insulation products that has been made under substantially similar conditions to those that Mullinex was subjected to.

149. Testing has proven that asbestos gaskets and asbestos packing materials are not encapsulated products and that millions of fibers are typically released from the intended use and removal of these products.

150. The airborne concentration of asbestos fibers is expressed in terms of fibers per cubic centimeter of air which sounds like a small number, but a concentration of 1 fiber/cubic centimeter is in fact 1 million fibers per cubic meter of air.

151. A typical breath of air inhales 500 cubic centimeters of air and a human being typically takes 16 breaths per minute; consequently, when there is a concentration of 1 fiber/cc, a person is breathing 8,000 fibers in one minute. By evaluating the time of the work and the concentration of the fibers, it is easy to see that the intended use and removal of asbestos gaskets and packing can result in the inhalation of millions of asbestos fibers in a fairly short period of time.

152. As demonstrated by the testing of Dr. William Longo and MAS, cutting gaskets from JCI's asbestos-containing gasket material can release free, respirable asbestos fibers in the ranges of 1.2 f/cc to 4.0 f/cc, for personal samples of fabricating a gasket with a ball peen hammer. *See* MAS Study, Gasket Fabrication (Mar. 2006 (JCI's 2150)).

153. Testing performed by Dr. James Millette, also from cutting JCI's 2150 asbestos-containing sheet gasket with a ball peen hammer, found asbestos release potential of 2.2 f/cc for personal samples. *See* Report of Results: MVA6662, Fiber Release Testing During Gasket Making at Section 10 of MAS Study, Gasket Fabrication (Mar. 2006).

154. Dr. Longo has also tested a comparable gasket, also approved for Navy use under the same military specification, Garlock's Style 900, and found that the asbestos fiber concentration under the NIOSH 7400 method, using the same gasket fabrication methods Mr. Mullinex and his shipmates described, with ranges from 1.1 f/cc to 3.4 f/cc. *See also* MAS Study, Gasket Fabrication II (Sept. 2006). This gasket material had a warning that was printed on the face of the gasket.

155. In 1972, Raybestos-Manhattan, the company that manufactured asbestos gaskets for John Crane, performed a test to determine asbestos fiber release from cutting asbestos gaskets Style 663 which are on the Navy's Qualified Products List to determine asbestos fiber release from cutting those products and cleaning up the debris. Raybestos determined that the average concentration from cutting this asbestos product was 2 f/cc and that during cleanup the exposure averaged 6 fibers per cc.

156. Testing by industry in 1973, e.g. Dow Chemical, showed that gasket cutting operations created 1-5 f/cc of airborne asbestos.

157. In 1975, a Navy industrial hygienist, Roger Beckett, determined from testing that the fabrication of asbestos gaskets with hand tools (hammers) created airborne asbestos concentrations of 3 f/cc; and when gaskets were fabricated with machinery, it created airborne asbestos concentrations of 5 f/cc. These test results were later incorporated into a comprehensive gasket study by the Navy in 1978.

158. The testing of Dr. Longo and MAS also demonstrates that free, respirable asbestos fibers are released from the removal of asbestos gaskets from flanges with scrapers, hand wire brushes, and power tools. The results of that testing included:

a. The asbestos fiber concentration under the NIOSH 7400 method in the MAS Study, Gasket Removal IV (2001), using the gasket removal work methods and tools described by Bert Mullinex and his various co-workers resulted in a range of 2.3 f/cc to 4.4 f/cc for the personal samples for scraping and wire brushing, and a range of 4.0 f/cc to 24.4 f/cc and 1.3-1.4 billion asbestos structures per square foot on the fabric analysis. Dr. Longo also measured the asbestos fiber release with a midjet impinger in this study, which resulted in 4.9 mppcf for hand wire brushing, 8.0 mppcf for scraping and wire brushing, 22.8 to 25.6 mppcf for power wire brushing for the personal samples.

b. Dr. Longo's study, Exposure to Airborne Chrysotile and Amphibole Fibers During Removal of Gaskets (Sept. 2010), also yielded similar results, with the asbestos fiber concentration under the NIOSH 7400 method, showing an average concentration of 0.64 f/cc for gaskets that were easily removed, and an average airborne fiber concentration of 3.60 f/cc when sheet gaskets more tightly adhered to the flange surfaces. When extensive scraping and wire brushing were required, the fiber release averaged 14.1 f/cc, and when the sheet gaskets were so tightly adhered to the flange surface that power wire brushing was required, the average airborne concentration level was 35.1 f/cc.

c. Another 2010 study, Milwaukee Valve Flange & Bonnet Gasket Removal with Hand Scraping, Hand Wire Brushing & Power Wire Brushing: A Work Practice Study (December 2010), yielded similar results, with ranges of 0.26 f/cc to 5.39 f/cc for hand scraping and hand wire brushing, ranges of 1.48 f/cc to 10.23 f/cc for power wire brushing the flanges, and ranges of 8.21 f/cc and 25.0 f/cc for power wire brushing the bonnet gasket.

d. Dr. Longo again found similar ranges of concentrations under the NIOSH 7400 method in our MAS Study, Bonnet Gasket and Valve Flange Removal with Pneumatic Power Grinding (January 2014), which had a range of 0.16 f/cc to 0.29 f/cc for valve bonnet scraping, and a range of 9.16 f/cc to 19.55 f/cc for pneumatic wire brushing of the valve bonnet gasket. The range for scraping the valve flange was from 0.17 f/cc to 0.68 f/cc, and for pneumatic wire brushing of the valve flange, the range was 1.73 f/cc to 22.49 f/cc. For pneumatic wire brushing, Dr. Longo found 1.2 to 24 billion asbestos structures per square foot, and from 28 million to 703 million asbestos structures per square foot on the worker's clothing.

e. In Dr. Longo's most recent test, MAS Study, Crane Co. II, Valve Flange Gasket Removal with Wire Brushing & Pneumatic Power Grinding (July 2015), he found that the asbestos fiber concentrations were in the range of 2.1 f/cc to 6.1 f/cc on one side of the valve flange, and 7.8 f/cc to 8.9 f/cc in the personal samples on the other side of the valve flange, and he also found 15 asbestos fibers on the worker's shirt after the test. Each of these tests also demonstrated the presence of significant respirable asbestos fibers from each of the area samples, which were taken 7-8 feet away.

159. Gasket removal testing—independent of any litigation—by the Newport News Shipyard and Shell Oil Company are comparable to the studies of Dr. Longo.

160. Dr. Longo's analysis of asbestos-containing gaskets found that they range from 65-85% chrysotile asbestos.

161. In Dr. Longo's testing on removal and replacement of asbestos valve packing, the NIOSH 7400 analysis consistently demonstrates the presence of respirable NIOSH fibers. The asbestos fiber concentration under the NIOSH 7400 method, in tests involving the removal and replacement of valve packing with the same work methods Mr. Mullinex used, ranged from 0.21 to 0.41 f/cc for the worker's personal sample. The helper's personal samples ranged from 0.05 f/cc to 0.13 f/cc. Dr. Longo also found between 153 million and 438 million asbestos structures per square foot on the clothing samples in Valve Packing II and between 2.64 and 19 billion asbestos structures per square foot on the clothing samples in Valve Packing III. *See* MAS Study, Removal and Replacing Valve Packing, Study II & Video (Nov. 1999) and MAS Study, Removal and Replacing Valve Packing Study III & Video (Nov. 1999).

162. These results for valve packing removal and replacement, gasket fabrication and gasket removal, far exceed the normal ambient background levels of 0.0005 f/cc by a factor of 1,000 to 10,000 times. They also exceed the OSHA excursion limit of 1 f/cc and the OSHA permissible exposure limit of 0.1 f/cc, which is the equivalent of 100,000 OSHA sized fibers per cubic meter of air. In 1994, OSHA determined that a substantial risk of cancer and death exists even at its permissible exposure level of 0.1 f/cc, and it estimated that 3.4 people out of 1,000 would still die of cancer if that exposure level existed over a work life. In the absence of occupational exposure to asbestos, the incidence of mesothelioma is only one in 1 million people.

163. Other published and unpublished studies demonstrate similar ranges for valve packing removal and replacement, and gasket removal and fabrication. The published and unpublished studies demonstrate that the work practice studies performed by Dr. Longo/MAS on asbestos gasket and packing fiber release are consistent with nonlitigation testing performed by industry and others, using the same work methods described by Mullinex and his co-workers. Some of these studies found levels that are lower than the MAS Studies, and some found levels that are higher than the MAS Studies. However, each of these studies demonstrates that asbestos gaskets and packing are capable of producing levels of exposure that are orders of magnitude above background levels of exposure.

164. Studies of asbestos gaskets by experts hired by asbestos gasket manufacturers have shown asbestos fiber release from asbestos gaskets and packing that is typically an order of magnitude lower than tests performed by industry, the Navy, or Dr. Longo. This is accounted for by the fact that most of these tests used work methods and tools that were not used in the Navy. For example, gasket cutters (razor blade equipment that was not available on Navy ships) as opposed to ball peen hammers; gaskets that pop off as opposed to gaskets on steam lines that split. The test results by industry experts are also substantially lower because all of their testing is converted to time-weighted averages, a process that improperly assumes zero exposure for the entire day except for the few minutes attributed to the test. OSHA has specifically stated that even these low fiber release studies by experts hired by the asbestos industry show that a warning should, nevertheless, have been provided by the manufacturers of asbestos gaskets.

165. Mullinex and all of his coworkers, including his supervisors, have reviewed the videotapes of Dr. Longo's testing and testified that the methods, tools, and materials used in his testing are identical to the methods that they and other Navy sailors used to fabricate and remove asbestos gaskets. Neither Mullinex nor any of his witnesses were shown any of the videotapes of testing by experts for John Crane; consequently, there is no foundation for the substantial similarity of that testing to the fabrication and removal of asbestos gaskets on Navy ships.

166. Mullinex and his coworkers all testified that Navy machinists did not install or remove asbestos pipecovering as part of their regular work, that their only work with pipecovering was infrequent and brief and involved the occasional removal of a few inches of pipecovering to access a valve. Dr. Longo has also conducted studies concerning the airborne asbestos fiber release from cutting small sections of pipecovering as described by Mullinex as an infrequent activity that he occasionally did to get access to flange bolts. Assuming that the pipecovering was in fact asbestos-containing, that testing demonstrated that the exposures from this activity were less than fabricating an asbestos gasket (0.24 f/cc -0.76 f/cc). *See Longo/MAS, Thermal Insulation Removal For Valve Repair: A Work Practice Study (March 2013).*

MEDICAL FACTS

167. All forms of asbestos cause mesothelioma.

168. Low doses of asbestos well below the permissible exposure limits set by OSHA cause mesothelioma as illustrated by epidemiological studies, case studies, NIOSH, peer-reviewed medical authorities, and a general consensus of the medical community.

169. Substantially every medical organization and governmental health organization has concluded that there is no known safe level of exposure to asbestos that is preventative of mesothelioma in all people.

170. Exposures to a mixture of asbestos fiber types (for example, chrysotile and amosite; or chrysotile and tremolite) are known to be far more carcinogenic than exposure to any single fiber type. As an example of this, exposure to amosite fibers alone at an average exposure level of 50 f/cc was shown in peer-reviewed medical literature to create a 4 percent death rate for mesothelioma; whereas exposure to pipecovering materials composed of amosite and chrysotile asbestos fibers at a concentration averaging only 3 f/cc (according to Dr. Irving Selikoff and his industrial hygienist W. J. Nicholson), the death rate from mesothelioma was 8 percent.

171. JCI's asbestos gaskets and packing products to which Bert Mullinex was exposed are composed of both chrysotile asbestos and tremolite asbestos as demonstrated by testing by Dr. Longo, which is un rebutted.

172. There is a consensus of medical opinion that a reliable history of significant asbestos exposure from occupational, domestic, or environmental sources is accepted as the basis for attributing specific cases of mesothelioma to prior asbestos exposure. *See the Helsinki Criteria.* Both Dr. Maddox and Dr. Spear will testify that (a) the asbestos exposures described by Mullinex and his coworkers to John Crane's asbestos gasket and packing materials were significant exposures that were high and uncontrolled during Mullinex's service onboard the *Holder*, *Sumner*, and *Edson*, (b) the asbestos exposures described by Mullinex and his coworkers to asbestos gaskets

and packing manufactured by Garlock and Chesterton were also significant exposures that were high and uncontrolled during Mullinex's service onboard the *Holder*, *Sumner*, and *Edson*, and (c) unknown to Mullinex and his coworkers, Mullinex had significant exposure from insulation products that contained amosite asbestos while working onboard the *Holder*, *Sumner*, or *Edson*, and this fact is shown by the presence of amosite fibers in Mullinex's lungs.

173. Dr. Maddox will testify that based upon his own experience with asbestos lung digestion studies and his review of the peer-reviewed scientific and medical literature that (a) The primary type of asbestos that is found in the pleura where mesothelioma occurs is chrysotile asbestos, because typically only small fibers can reach the pleura, and amosite fibers are larger and thicker than chrysotile fibers; consequently, it is more difficult for amosite fibers to translocate from the lung to the pleura, (b) On a fiber-by-fiber basis amosite asbestos is more potent than chrysotile; however, a mixture of chrysotile and amosite asbestos is more potent by far than either of these fibers alone, (c) Chrysotile fibers are rarely found in lung tissue after 30 years because they have a half-life in the lung of one year or less, and after 30 years only one-billionth of the chrysotile that was originally inhaled is present; consequently, the absence of chrysotile in the lung of Bert Mullinex has no relationship to the nature and extent of his exposure to chrysotile 30 to 40 years previously, (d) The half-life of amosite is 8 to 10 years; consequently, a large percentage of the amosite fibers that were originally inhaled will still be present 40 years after the exposure ended which explains why lung digestion studies typically find amosite fibers, but they do not find chrysotile fibers, (e) The fibers that remain in the lung do not contribute directly or indirectly to the causation of mesothelioma because they do not have contact with the mesothelial cells that create the cancer, (f) The presence of substantial amosite in the lung creates an inference that some of the amosite did reach the pleura where it would have contributed to the development of mesothelioma, and (g) Mesothelioma is caused by the cumulative effect of the chrysotile, tremolite, and amosite asbestos fibers that reach the pleura.

174. The diagnosis of mesothelioma was accompanied by the secondary benign finding of pleural plaques. Pleural plaques are not disabling, but they are an indication of past asbestos exposure. Pleural plaques are not specifically related to one fiber type or another. These plaques are found in patients who have had chrysotile exposure only, amosite exposure only, and mixed exposure to chrysotile and amosite. The finding of pleural plaques in this case does not lend any credence to the suggestion of the defense that Mullinex's mesothelioma was caused solely by amosite.

175. Another secondary finding in the pathology of Bert Mullinex was the finding of asbestos bodies in the lung tissue. Both chrysotile asbestos and amosite asbestos can be the cause of asbestos bodies. An asbestos body is simply a ferritin-covered asbestos fiber in the lung that can be seen with a microscopic examination of lung tissue. These asbestos bodies are more often than not amosite, but there must be an analysis of the asbestos body to say with certainty that the fiber is amosite or chrysotile. Once an asbestos fiber is covered with ferritin, it is inert, and neither contributes to asbestosis or cancer. Asbestos bodies have no influence on the development of mesothelioma; they are merely a marker of past asbestos exposure. There are no asbestos bodies in the pleura, and that is where the mesothelioma occurs.

176. Dr. Maddox (a pathologist who has seen over 2,000 mesothelioma cases and has been accepted as an expert in the causation of mesothelioma in State and Federal courts all over

the United States) will testify that based upon the testimony of Mullinex and his coworkers and the testing by Dr. Longo, the Navy, and industry, that the exposure of Mullinex to asbestos gaskets and packing materials sold by John Crane to the Navy was a substantial contributing factor to his development of mesothelioma and of his death from mesothelioma. Dr. Maddox will also rely upon a variety of reliable published medical articles, epidemiological studies, industrial hygiene studies, and his own experience as an expert in lung pathology and carcinogenesis to conclude that the chrysotile and tremolite asbestos in John Crane's asbestos gasket and packing materials can and do cause mesothelioma in cases substantially similar to the exposure of Bert Mullinex as well as in cases where the demonstrated exposure to chrysotile and tremolite was much less.

177. Chrysotile asbestos in the lung breaks down into small fibrils which are then translocated from the lung to the pleura by way of the "Pores of Kohn," which are narrow openings between the lung tissue and the pleura. Amosite fibers are far larger than chrysotile fibers; consequently, far fewer amosite fibers break down and become small enough to reach the pleura.

178. The methodology used in the lung digestion study of Bert Mullinex was designed to eliminate the possibility of finding chrysotile in Mullinex's lungs because the tester only counted fibers that were 5 microns long or greater; and it is highly unlikely that any chrysotile fibers would remain in the lungs after 30 years; and if any chrysotile continues to exist in lung tissue after 30 years, it will invariably be less than 5 microns long. John Crane's attorneys dictated that the tester should only count asbestos fibers that were 5 microns or longer. The normal procedure for the testing company was to count any fiber that was .5 microns in length.

179. Bert Mullinex's exposure to airborne asbestos fibers from the intended use and removal of JCI's asbestos gaskets and packing materials onboard Navy ships, either from hands-on use of these products or from close proximity to other machinist mates who were using or removing these products, was regular, frequent, and routine, and resulted in high exposures over a period of four to five years that cumulatively were a substantial contributing factor to the development of his mesothelioma.

NO NAVY DISCRETION, PREVENTION, OR PROHIBITION

180. From December 1969 until November 1978, Navy specifications and regulations did not prohibit or prevent JCI from placing a warning on its asbestos sheet gasket material Style 2150 or on the packaging of this product that it sold to the Navy; and the Navy did not exercise any discretion with regard to warning labels that the manufacturers of asbestos gaskets could place on the packaging or face of their products.

181. Navy specifications and regulations did not prohibit or prevent JCI from placing a warning on the spools and packages of JCI's asbestos packing materials that it sold to the Navy; and the Navy did not exercise any discretion with regard to warning labels that the manufacturers of asbestos packing could place on the packaging or face of their products.

182. George McKillop, the former corporate representative of JCI and former head of the packing division at its plant in Morton Grove, Illinois, who started working for JCI in the 1950s has testified there were no government regulations that prevented JCI from placing a warning on its asbestos gaskets and packing products that were sold to the Navy.

183. Vance Vorhees, JCI's former executive vice-president, who worked for JCI starting in the 1940s, testified that there were no government regulations that prevented JCI from placing a warning on its asbestos gasket and packing products that were sold to the Navy.

184. JCI's corporate representative, George Springs, who started working for JCI in 1977 and did not become an officer at JCI until 1998, has testified under oath that JCI "could have put anything on the sheet gasket material that they wanted to put on it." JCI's own sheet gaskets contained additional markings not set forth by the gasket specifications, as set forth in JCI's own catalog published in the 1950s. At that time, the "branding" paragraph of MIL-A-17472 (SHIPS) (1953) specified that "Every square foot, or less, of the asbestos sheet be plainly marked with the manufacturer's brand name." John Crane's Symbol 2150 gasket material, however, also included the non-specified markings "2150," "Navy", "High Pressure", "Sheet Packing", "New York - Chicago - Phila," along with a square pattern around the "John Crane" (JCI) name. Later versions of JCI's gasket material in the 1960s and 70s included a diamond shaped pattern all over the gasket material even though the specification at the time was silent as to such markings.

185. JCI's decision not to put a warning on any of its products—whether they were gaskets or packing, or whether they were chrysotile or crocidolite—ignored the consensus of scientific opinion that existed throughout the time period 1970 to 1978 that asbestos-containing products like gaskets and packing should be tested to determine if they release respirable asbestos fibers during their intended or foreseeable use and that minimal airborne asbestos exposure carries with it a significant risk of mesothelioma that should be warned against.

186. JCI never discussed or apprised the Navy of hazards in the use of its gaskets and packing products until at least the 1980s.

MULLINEX IS NOT AT FAULT AND JCI SHOULD HAVE WARNED HIM

187. Bert Mullinex's prompt and wise response to his first knowledge about the hazards of asbestos in pipecovering shows conclusively that he would have followed an adequate warning from John Crane to protect himself from breathing asbestos dust and fibers from asbestos gaskets and packing and insulation if an adequate warning had been given, which it was not.

188. The inference that Bert Mullinex made that a mask and protective clothing should be worn when fabricating and removing asbestos gaskets because of the simple fact that asbestos fibers are invisible, and invisible fibers are the cause of cancer, is the same inference that JCI should have made long before Bert Mullinex ever joined the Navy; and it is the reason JCI should have placed a warning on its packaging or on its products.

189. Bert Mullinex was not contributorily negligent in causing his mesothelioma.

190. Bert Mullinex was not comparatively negligent in causing his mesothelioma.

191. Bert Mullinex did not assume the risk of mesothelioma.

192. JCI's asbestos-containing gaskets and packing reached Bert Mullinex, and his shipmates without substantial change in the condition in which they were sold.

193. Crane Packing Company and John Crane-Houdaille, Inc., are predecessors to John Crane, Inc., (hereinafter "JCI"), and JCI is successor in interest for these entities with regard to asbestos claims.

194. JCI knew, had reason to know, or should have known of the historic state-of-the-art literature and other information placing them on notice of the hazards of asbestos and products containing asbestos.

195. JCI knew, had reason to know, should have known or could have reasonably determined that the normal, foreseeable use of their asbestos-containing products was dangerous and required a warning.

196. JCI's asbestos-containing products were defective and inherently dangerous in the manner in which they were marketed for their failure to contain or include adequate warnings on their asbestos-containing products regarding potential health hazards associated with the use, removal or maintenance or, or the exposure to the products. The defective and inherently dangerous condition of these asbestos containing products, coupled with the disabling and/or fatal diseases generated by the inhalation of asbestos dust, rendered such asbestos-containing products unreasonably and inherently dangerous.

197. Other gasket manufacturers, including Greene, Tweed & Co., Anchor Packing, and Garlock, sold asbestos-containing sheet gasket material to the Navy and applied warning labels on the face of their gasket material at various times from 1972 to 1977.

DAMAGES

198. On November 11, 2021 Herbert Mullinex died from malignant mesothelioma, a debilitating and terminal condition, at the age of 73. Mullinex's disease and its impact upon his bodily systems, along with the necessary and proper treatments for that disease caused him extreme fatigue, discomfort, pain, constipation, nausea, loss of appetite, weight loss, emaciation, indigestion, shortness of breath, chronic cough, anxiety, depression, fear, immobility, inability to bathe, use the restroom or care for himself, along with repeated hospital treatments, including chemotherapy and surgery. For many months he was on oxygen 24 hours a day. As his disease progressed, he was largely confined to his home, and to a hospital bed or chair, with the exception of medical treatments, and he was unable to participate in any of the normal recreational, social, or marital activities of life which are normal to a good marriage and to which Herbert Mullinex, Jr. and Patricia Mullinex were accustomed to prior to Mr. Mullinex's mesothelioma diagnosis.

199. As a proximate result of JCI's failure to warn, which was a substantial contributing factor in the development of Bert Mullinex's disease and condition as set forth above, Plaintiff's Spouse, Patricia Mullinex, was deprived of the physical, mental, and emotional services, comfort, society, attentions, pleasure, solace, fellowship, marital life, companionship, and consortium of her husband.

200. As a direct and proximate result of the negligence, carelessness, gross negligence, recklessness, willful or wanton misconduct, strict liability, fraudulent concealment, misrepresentations and willful omissions of JCI, Bert Mullinex was caused to contract diseases and injuries of his body systems, lungs, and heart, including malignant mesothelioma, which have

caused Bert Mullinex pain, suffering, mental anguish, and ultimately caused his death.

201. Bert Mullinex incurred medical expenses in the amount of \$1,078,883.70; had his enjoyment of life impaired; and was caused to suffer great physical pain and suffering and psychological and mental trauma.

202. As a result of the aforesaid injuries to decedent, Bert Mullinex, Plaintiff, Mr. Mullinex's spouse, Patricia E. Mullinex, has suffered mental anguish by being forced to witness the suffering endured by Mr. Mullinex whereby Mrs. Mullinex's own nerves and health have been seriously and permanently shocked, weakened, and impaired; and by reason of the physical and mental condition of Mr. Mullinex, Mrs. Mullinex spouse continues to suffer in mind and body, and has been denied the care, protection, consideration, companionship, services, income, aid, pleasure, assistance, and society of Bert Mullinex.

B. Defendant JCI's Factual Contentions are as follows²:

1. JCI refutes Plaintiff's contention that Bert worked "regularly" or "frequently" with, or "in close proximity" to, JCI-branded gaskets and packing. For work that involved the removal and replacement of gaskets or packing, the evidence will demonstrate that a variety of both non-asbestos and asbestos-containing gasket and packing materials were specified for different systems and applications. For asbestos-containing sheet gasket material (Navy "2150"), the only gasket material JCI ever sold to the Navy, approximately half of the services in Bert's workspaces did not allow 2150 to be used. Even in those services where 2150 could be used, there were numerous approved brands used on Navy ships during the relevant time period. The same is true of valve and pump stem packing material.

2. JCI contends there is no record evidence that Bert ever removed a JCI-branded gasket or packing material, and, as such, there is no evidence Bert was ever exposed to asbestos during the removal of any JCI-branded gaskets and packing.

3. JCI contends there is no record evidence that Bert during the relevant time period ever worked with or around a power grinder to remove any gasket material (JCI or otherwise).

4. JCI contends there is no record evidence that Bert ever removed a JCI-branded gasket or packing material, and, as such, there is no evidence Bert was ever exposed to asbestos during the removal of any JCI-branded gaskets and packing.

5. Any asbestos-containing, JCI-branded sheet gasket material and packing at issue was comprised of chrysotile asbestos fiber that was encapsulated in a mixture of materials that prevented the release of airborne asbestos fiber during their normal and foreseeable use.

² JCI's understanding is that the Statement of Factual Contentions is an overview of the primary factual contentions at trial and not a comprehensive recitation of all the evidence supporting each triable fact. JCI objects to Plaintiff's Factual Contentions, which spans 201 paragraphs, and includes summaries of testimony and other evidence that are irrelevant to the issues in the case (and also include certain evidence that has been ruled inadmissible).

6. Any release of airborne chrysotile asbestos fibers from work with JCI-branded gaskets and packing was insufficient to raise Bert's risk of asbestos-related disease, and was well within all current and historical occupational exposure limits (including the "permissible exposure limits" ("PELs") published by OSHA regulations and the "threshold limit values" ("TLVs") published by the American Conference of Government Industrial Hygienists ("ACGIH")).

7. Based on the applicable government regulations, industry standards and state of medical, scientific, engineering and other technical knowledge during the relevant time period, there was no foreseeable risk associated with the normal and foreseeable use of asbestos-containing gaskets and packing and, therefore, no duty on the part of JCI to warn.

8. Bert experienced regular, frequent and heavy exposures to asbestos-containing thermal insulation aboard Navy ships, including amosite-containing thermal insulation, by working directly with insulation materials (including the removal and reapplication of pipecovering, asbestos felts and blankets, and other materials), working in close proximity to others disturbing such materials, and from contamination of the environment from work with such materials.

9. A fiber digestion study of available lung tissue shows that Bert has a very high concentration of amosite fibers in his lung from occupational exposure to thermal insulation during his Navy service. Additionally, the clinical findings of bilateral pleural plaques and presence of asbestos bodies further demonstrates his exposure to amphibole-containing thermal insulation.

10. The reliable scientific literature demonstrates there is no increased risk of mesothelioma from exposure to chrysotile fibers from work with gaskets, packing and similar products.

11. The reliable scientific literature shows that amosite asbestos fiber – the type contained in thermal insulation products – is far more potent than chrysotile asbestos fiber in causing asbestos-related disease, including mesothelioma.

12. The U.S. Navy issued reasonably precise military specifications for asbestos-containing sheet gasket and packing material that specified all aspects of the material composition (including the type and percentage of asbestos fiber), the design, manufacture, shipment and labeling for those products. The Navy dictated what could appear on the face of gasket material and the packaging for gasket and packing material, and an asbestos warning was not permitted. JCI's products conformed to those specifications, and the Navy – which inspected goods for compliance with marking and labeling requirements – never rejected a shipment for failure to include a warning, nor did it ever find JCI in violation of any specification for failing to include a warning on these products.³

³ At the October 7, 2021 hearing on the parties' pretrial motions, Judge Miller stated that he had limited JCI's affirmative government contractor defense to the face of the gaskets. He also said that his ruling did not prohibit JCI from introducing evidence that the government would not allow warnings on product packaging or on spools of packing. JCI simply cannot assert the government contractor defense as to those other warnings.

13. The Navy had equal or greater knowledge to that of JCI regarding the potential health hazards associated with asbestos.

14. Even if the Navy had permitted a warning on the packaging of gasket material, such warning would have had no effect because neither Bert nor his shipmates ever saw the packaging in which gasket material was shipped to the Navy.

15. A warning on JCI-branded sheet gaskets or packing would not have prevented the exposure to the amosite-containing thermal insulation that caused his mesothelioma.

V. TRIABLE ISSUES

A. The Triable Issues as Contended by the Plaintiff are:

1. Whether JCI is held to the standard of an expert with regard to the potential hazards associated with the carcinogenic asbestos fibers contained in its asbestos-containing gaskets and packing.
2. Whether JCI had a duty to:
 - a) know what was knowable and research the hazardous characteristics of the asbestos fibers that were incorporated into its asbestos containing products;
 - b) test the potential asbestos fiber release associated from the intended use and removal of asbestos-containing gaskets and packing;
 - c) anticipate the environment where its asbestos-containing gaskets and packing would be used, including the likelihood that it would be used with other asbestos-containing products including both chrysotile and/or amosite insulation products;
 - d) and to provide adequate warnings on their packaging, spools, written materials, face of their gaskets or anywhere else to warn consumers of its asbestos-containing gaskets and packing, including consumers and end-users of its asbestos-containing gaskets and packing concerning: (1) the asbestos content of its products, (2) the specific health risk associated with breathing asbestos fibers

from the intended use of its products, and (3) the protective safety measures that should be followed to prevent the breathing of airborne asbestos fibers whenever asbestos-containing gaskets and packing were fabricated, removed, or subjected to any other intended use, including the increased risk of using asbestos-containing gaskets and packing with other asbestos-containing products which also had the potential to release airborne asbestos fibers into the same environment.

3. Whether JCI was negligent for breaching its duties: (1) to research and know the hazardous characteristics of the asbestos fibers that were incorporated into its asbestos-containing products, (2) test the potential asbestos fiber release associated from the intended use and removal of asbestos-containing gaskets and packing, and (3) anticipate the environment where its asbestos-containing products would be used and (4) to adequately warn the ultimate consumer and end-users of the potential health hazards associated with the breathing asbestos fibers from the intended and foreseeable uses of its asbestos-containing gaskets and packing.

4. Whether JCI's negligence was a substantial contributing factor in the creating asbestos exposure that caused or contributed to cause Bert Mullinex's mesothelioma.

5. Whether JCI's failure to put adequate warnings on its asbestos-containing gaskets and packing rendered those products unreasonably dangerous to the ultimate user or consumer, and whether these unreasonably dangerous products were expected to reach the ultimate user or consumer without any substantial change in the condition in which they were sold. *See* Restatement (Second) §402A. And if so, whether such failure to provide an adequate warning to Mullinex was a substantial contributing factor to the development of his mesothelioma.

6. Whether and to what extent decedent, Bert Mullinex, Jr. and Plaintiff, Patricia

Mullinex have suffered damages, and the amount of those damages.

7. Whether decedent, Bert Mullinex, is entitled to damages for his pain and suffering, and mental anguish from JCI; and the amount of those damages.

8. Whether decedent, Bert Mullinex is entitled to damages for his medical expenses, which are stipulated in the total amount of \$1,078,883.70.

9. Whether Plaintiff, Patricia Mullinex, is entitled to damages for her pre-death loss of society and consortium,⁴ and if so, the amount of those damages.

10. Whether Plaintiff, Patricia Mullinex, is entitled to compensation for the reasonably expected loss of services, protection, care and assistance provided by decedent, Herbert Mullinex.

11. Whether Plaintiff is entitled to compensation for the decedent, Herbert Mullinex's funeral expenses.

12. Whether Plaintiff is entitled to recover the costs incurred for these proceedings.

13. Whether Plaintiff is entitled to punitive damages from JCI., and if so the amount of these damages.⁵

B. Defendant JCI's Statement of Triable Issues:

1. JCI is pursuing the government contractor defense and claims that it enjoys the same immunity from suit as the federal government under the Eleventh Amendment to the United States

⁴ Plaintiff objected to Magistrate Judge Miller's report and recommendation (ECF 351) recommending that Mrs. Mullinex's claim for loss of society and loss of society damages are unavailable in this case. (*See* ECF 366). For the reasons stated in Plaintiff's objection, Plaintiff continues to object to the exclusion of Mrs. Mullinex's claim for loss of society and loss of society damages.

⁵ Plaintiff objected to Magistrate Judge Miller's report and recommendation (ECF 351) recommending that punitive damages are unavailable in this case. (*See* ECF 366). For the reasons stated in Plaintiff's objections, Plaintiff continues to object to the exclusion of punitive damages.

Constitution. The United States Supreme Court has extended that immunity to contractors, like JCI, when sued for alleged product defects in products supplied according to (and meeting) government specifications. *Boyle v. United Techs. Corp.*, 487 U.S. 500, 511-12 (1988). Plaintiff asserts such a claim here, alleging that gasket and packing material supplied by JCI was defective for failure to include warning labels concerning the potential health effects of asbestos. The reasonably precise military specifications for those products specified all aspects of the design, manufacture, shipment and labeling for those products. The Navy dictated what could appear on the face of gasket material and an asbestos warning was not permitted. JCI's products conformed to those specifications, and the Navy – which inspected goods for compliance with marking and labeling requirements – never rejected a shipment for failure to include a warning, nor did it ever find JCI in violation of any specification for failing to include a warning on these products. The Navy (which began doing experimental work with gaskets and packing since before JCI was a company) had equal or greater knowledge to that of JCI regarding the potential health hazards associated with asbestos.

2. JCI owed no statutory or common-law duty to warn during the relevant time period, because the products at issue did not pose a foreseeable risk of harm.

3. JCI's conduct and its products were in compliance with the relevant knowledge and state-of-the-art during the relevant time period.

4. The absence of a warning on JCI's products was not a proximate cause of Bert's alleged injurious exposure to airborne asbestos fibers.

5. Any alleged exposure to any JCI-branded asbestos-containing products was not a substantial contributing factor in causing Bert's mesothelioma.

6. Bert's regular and frequent exposure to thermal insulation, including amphibole-containing insulation, was the sole cause of his mesothelioma.

7. To the extent Plaintiff seeks to recover under maritime law on a negligent failure-to-warn theory, maritime cases make clear that such claims are governed by Restatement (Second) of Torts §388. *Martinez v. Dixie Carriers, Inc.*, 529 F.2d 457 (5th Circ. 1976) (applying §388 in context of negligent failure to warn under maritime law). Section 388, in turn, expressly incorporates the "reason to know" standard. The Restatement explains in its "Definitions" section that throughout the Restatement, "reason to know" denotes actual possession of the facts from which a defendant could conclude that a substance is harmful: "The words 'reason to know' . . . denote the fact that the actor has information from which a person of reasonable intelligence or of the superior intelligence of the actor would infer that the fact in question exists, or that such person would govern his conduct upon the assumption that such fact exists." *Id.*, §12.

8. In the event Plaintiff is seeking to recover under a strict liability claim for failure-to-warn, maritime law reflects that such claims are not a "pure strict liability" standard. Rather, such claims are governed under a "knew-or-should-have-known" standard. *See Pavlides v. Galveston Yacht Basin, Inc.*, 727 F.2d 330 (5th Cir. 1985); 1 Thomas J. Schoenbaum, Admiralty and Maritime Law, *Admiralty and the General Maritime Law* §5-7, at 285 (West 5th ed. 2011).

ENTERED this 17th day of May.

/s/ [Signature]
Douglas E. Miller
United States Magistrate Judge

Douglas Miller
UNITED STATES MAGISTRATE JUDGE

We ask for this:

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